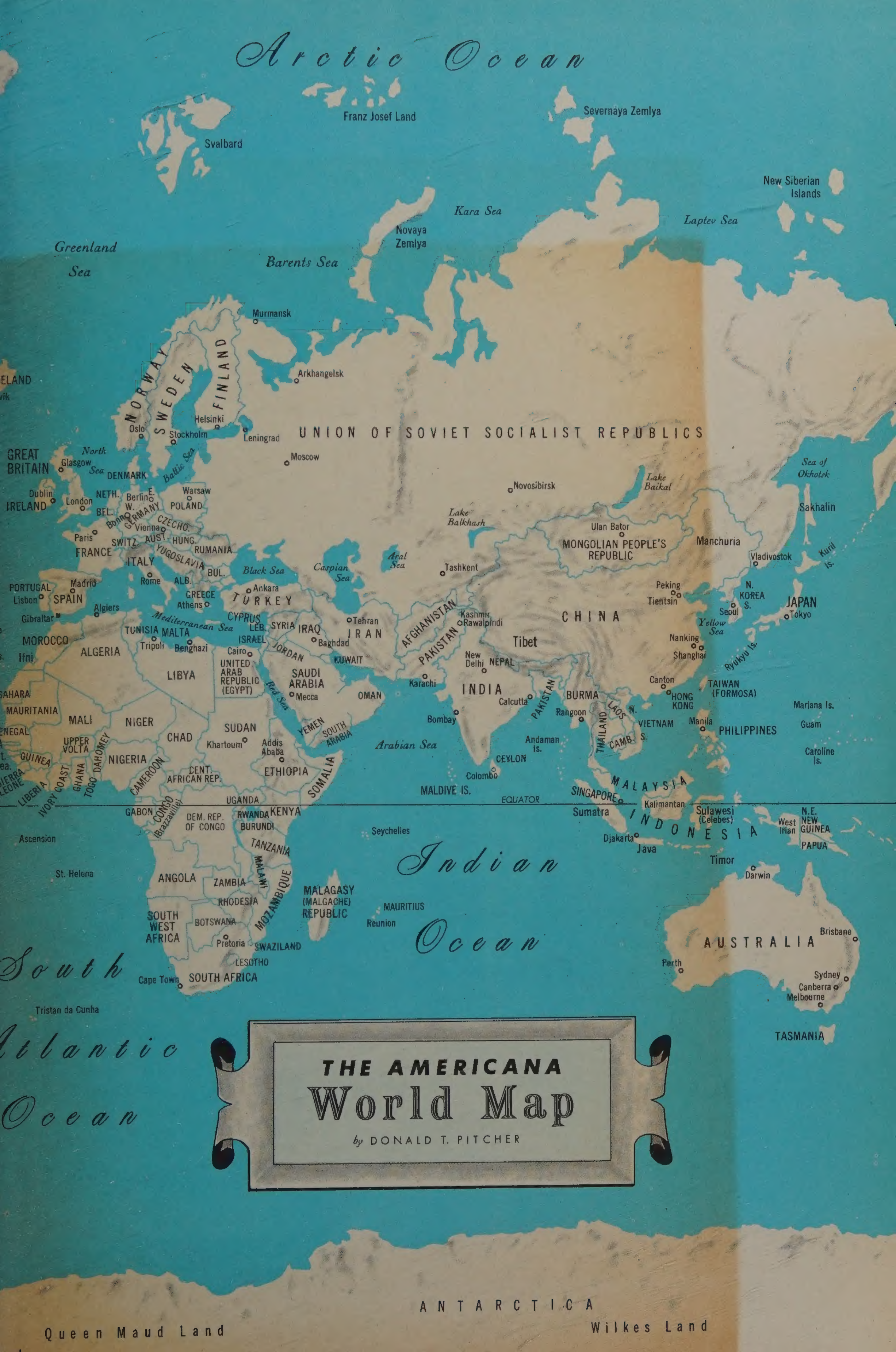
Arctic Ocean
Ellesmere Island
Thule
GREENLAND
Devon I.
Baffin Bay
East Siberian Sea
Wrangel I.
Point Barrow
Beaufort Sea
Victoria Island
Baffin I.
USSR (SIBERIA)
Bering Strait
Nome
ALASKA
Davis Strait
Godthaab
Bering Sea
Anchorage
Hudson Bay
Kamchatka Peninsula
Juneau
Aleutian Is.
CANADA
Winnipeg
Vancouver
Seattle
Quebec
Montreal
Ottawa
Toronto
St. John's
Detroit
Denver
Chicago
Boston
San Francisco
Cleveland
New York
Philadelphia
UNITED STATES
Washington
North Pacific
Los Angeles
North
Azores
Midway Is.
Houston
New Orleans
Bermuda
Atlantic
Gulf of Mexico
Miami
Bahamas
Honolulu
MEXICO
Havana
CUBA
Wake I.
HAWAII
Mexico City
DOM. REP.
Puerto Rico
Virgin Is.
BR. HON.
HAITI
HONDURAS
JAMAICA
Ocean
Caribbean Sea
Ocean
GUATEMALA
EL SALVADOR
NICARAGUA
Marshall Islands
Clipperton
BARBADOS
COSTA RICA
Caracas
TRINIDAD-TOBAGO
VENEZUELA
GUYANA
SURINAM
FR. GUIANA
PANAMA
COLOMBIA
Gilbert Islands
EQUATOR
Bogotá
Quito
Galápagos Is.
ECUADOR
Belém
Bismarck Arch.
Marquesas Is.
Solomon Islands
Ellice Islands
PERU
Recife
Samoa
BRAZIL
New Hebrides
Society Islands
Tuamotu Arch.
Lima
La Paz
Brasília
N
BOLIVIA
Fiji Islands
Sucre
New Caledonia
Pitcairn I.
PARAGUAY
Rio de Janeiro
São Paulo
Asunción
South
Pacific
Tasman Sea
Auckland
URUGUAY
Montevideo
Santiago
Buenos Aires
Wellington
NEW ZEALAND
Ocean
CHILE
ARGENTINA
Falkland Is.
Tierra del Fuego
S. Georgia
S. Shetland Is.
S. Orkney Is.
Antarctic Peninsula
Victoria Land
Bellingshausen Sea
Weddell Sea
Alexander I Island
ANTARCTICA
Ross Sea
Marie Byrd Land


THE AMERICANA

World Map

by DONALD T. PITCHER

Arctic Ocean
Franz Josef Land
Severnaya Zemlya
Svalbard
New Siberian Islands
Kara Sea
Laptev Sea
Novaya Zemlya
Greenland Sea
Barents Sea
Murmansk
Arkhangelsk
ELAND
vik
NORWAY
SWEDEN
FINLAND
Helsinki
Oslo
Stockholm
Leningrad
UNION OF SOVIET SOCIALIST REPUBLICS
Moscow
GREAT BRITAIN
North Sea
Glasgow
DENMARK
Baltic Sea
Dublin
IRELAND
London
NETH.
Berlin
E.
W.
GERMANY
Warsaw
POLAND
Bonn
BEL.
CZECHO.
Vienna
AUST.
HUNG.
Paris
SWITZ.
FRANCE
YUGOSLAVIA
RUMANIA
ITALY
BUL.
Black Sea
Caspian Sea
Aral Sea
Lake Balkhash
Novosibirsk
Lake Baikal
Sea of Okhotsk
Sakhalin
Ulan Bator
MONGOLIAN PEOPLE'S REPUBLIC
Manchuria
Vladivostok
Kuril Is.
Tashkent
PORTUGAL
Lisbon
Madrid
SPAIN
Rome
ALB.
GREECE
Athens
Ankara
TURKEY
Gibraltar
Algiers
Mediterranean Sea
CYPRUS
LEB.
SYRIA
IRAQ
Tehran
IRAN
AFGHANISTAN
Kashmir
Rawalpindi
CHINA
Peking
Tientsin
N. KOREA
S.
Seoul
JAPAN
Tokyo
Yellow Sea
MOROCCO
TUNISIA
MALTA
Tripoli
Benghazi
ISRAEL
Baghdad
JORDAN
PAKISTAN
Tibet
Nanking
Shanghai
Ryukyu Is.
Ifni
ALGERIA
LIBYA
Cairo
UNITED ARAB REPUBLIC (EGYPT)
KUWAIT
SAUDI ARABIA
Red Sea
Mecca
New Delhi
NEPAL
Karachi
INDIA
Calcutta
PAKISTAN
BURMA
Canton
HONG KONG
TAIWAN (FORMOSA)
Mariana Is.
SAHARA
MAURITANIA
MALI
NIGER
OMAN
Bombay
Rangoon
LAOS
N.
VIETNAM
S.
Manila
PHILIPPINES
Guam
ENEGAL
UPPER VOLTA
DAHOMEY
CHAD
SUDAN
Khartoum
YEMEN
SOUTH ARABIA
Arabian Sea
THAILAND
CAMB.
Caroline Is.
GUINEA
NIGERIA
Addis Ababa
Andaman Is.
CEYLON
IERRA LEONE
LIBERIA
IVORY COAST
GHANA
TOGO
CAMEROON
CENT. AFRICAN REP.
ETHIOPIA
SOMALIA
Colombo
MALDIVE IS.
MALAYSIA
SINGAPORE
EQUATOR
GABON
CONGO (Brazzaville)
UGANDA
DEM. REP. OF CONGO
RWANDA
KENYA
BURUNDI
Kalimantan
Sumatra
Sulawesi (Celebes)
INDONESIA
West Irian
N.E. NEW GUINEA
PAPUA
Ascension
Seychelles
Djakarta
Java
TANZANIA
Indian Ocean
Timor
Darwin
St. Helena
ANGOLA
ZAMBIA
MALAWI
MOZAMBIQUE
MALAGASY (MALGACHE) REPUBLIC
RHODESIA
MAURITIUS
Reunion
SOUTH WEST AFRICA
BOTSWANA
Pretoria
SWAZILAND
LESOTHO
AUSTRALIA
Brisbane
Perth
Sydney
Canberra
Melbourne
South Atlantic Ocean
Cape Town
SOUTH AFRICA
Tristan da Cunha
TASMANIA
ANTARCTICA
Queen Maud Land
Wilkes Land

THE AMERICANA ANNUAL

1968

AN ENCYCLOPEDIA OF THE EVENTS OF 1967

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VIETNAM 1967: Weariness overcomes a U. S. infantryman during a pause in the fighting. The war grew in intensity during the year.

PREFACE

In an age of communications marvels, a lot of people were failing to communicate with each other in 1967. The calamities resulting from that failure are described in this 46th edition of THE AMERICANA ANNUAL.

Even as earthbound scientists were manipulating a metal claw on the surface of the moon, and sending one of their machines into the atmosphere of Venus some 49 million miles away, the world's politicians and diplomats were unable to communicate across the width of a conference table, if they sat down at a table at all. As a consequence, an old war in Vietnam and a new war in the Middle East produced—in this day of scientific wonders—the same misery and degradation that have afflicted man from his primitive beginnings.

The gulf between the darker and brighter sides of man's nature remained all too apparent in 1967, but other chasms were widening all over the world—between the rich and the poor, between the industrialized and the underdeveloped nations, and between the food supply and a soaring population. But perhaps nowhere were the divisions as dramatically evident as in the United States. Deep and bitter gaps were opening between supporters and critics of the war in Southeast Asia, between young people and their elders, between the affluent and the impoverished, and, most tragically, between blacks and whites. The Negro protest movement was taking new and alarming directions, and violence broke across the land like a summer storm.

Scarcely seven years had elapsed since that bright, frosty noon in Washington, D. C., when John F. Kennedy delivered his first and last inaugural address. Americans whose hearts were stirred by that exalted restatement of the nation's highest ideals now looked upon the debris of their strife-torn cities, the brutalizing war in Vietnam, and the angry alienation of their youth. They might well wonder, as Army tanks rumbled through the streets of Newark and Detroit, when and where America had lost its way.

It was a year of tribulation in other countries, too. Spectacularly in the Middle East, but also in mainland China, Nigeria, and Greece, upheavals occurred that sent reverberations around the world. The pace of history seemed to be quickening as the world entered the last third of the 20th century. Developments in technology, medicine, religion, culture, and economics affected the lives of everyone and promised even greater changes for the future.

Each year it becomes increasingly difficult to select from the welter of news the most important, the most meaningful, or simply the most interesting events for inclusion in THE AMERICANA ANNUAL. The editors are profoundly indebted to the thousands of persons who helped in the endeavor to meet that challenge in the present volume.

S. J. F.

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Editorial Director
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for THE AMERICANA ANNUAL

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KLINE, GORDON M., Technical Editor, *Modern Plastics:* Plastics

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LA BERGE, LIONEL, Director, *Quebec Year Book:* Quebec

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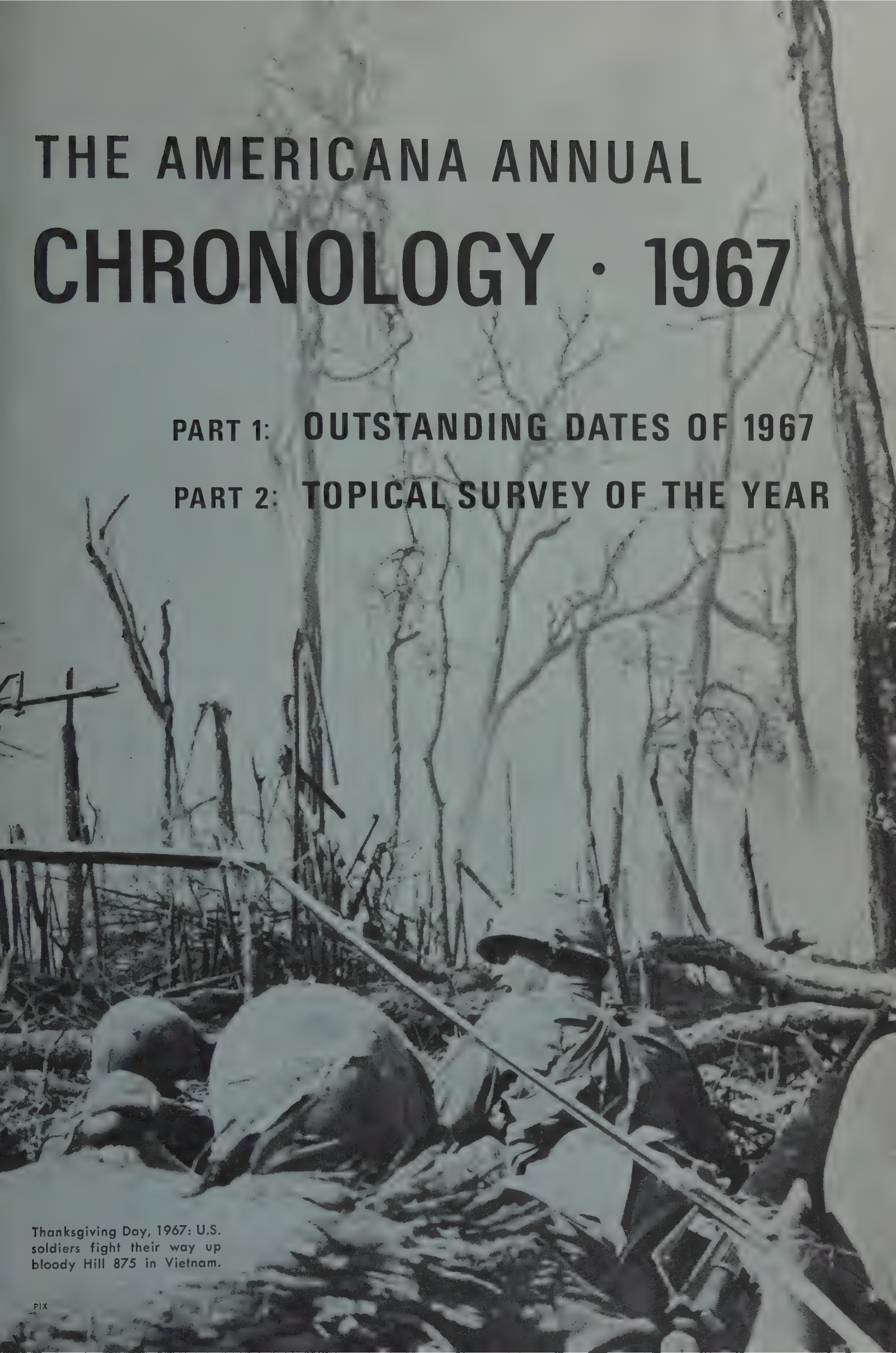
THE AMERICANA ANNUAL
CHRONOLOGY · 1967

PART 1: OUTSTANDING DATES OF 1967

PART 2: TOPICAL SURVEY OF THE YEAR



Thanksgiving Day, 1967: U.S. soldiers fight their way up bloody Hill 875 in Vietnam.

PIX

JAN. 1967

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CHRONOLOGY • PART 1

OUTSTANDING DATES OF 1967

JANUARY

13—Togo Army Chief of Staff Col. Étienne Eyadema deposes President Nicolas Grunitzky in a swift, bloodless coup.

27—U. S. astronauts Virgil I. Grissom, Edward H. White II, and Roger B. Chaffee are killed in a flash fire in the Apollo spacecraft during a test on the launch pad at Cape Kennedy, Fla.

30—USSR President Nikolai V. Podgorny confers with Pope Paul VI while on an official visit to Italy.

FEBRUARY

5—Anastasio Somoza Debayle, Jr., son and brother of presidents, sweeps Nicaraguan presidential elections after riot-torn campaign.

12—Representatives of 21 Latin American states, meeting in Mexico City, negotiate treaty banning nuclear weapons in Central and South America and the Caribbean region.

20—President Sukarno of Indonesia transfers his executive powers to General Suharto.

24—Congress party is returned to power in India after national elections, but with a greatly reduced majority.

MARCH

12—India's Prime Minister Indira Gandhi is reelected.

12—Indonesian Congress formally strips Sukarno of all his titles, retroactive to Feb. 22.

18—Tanker *Torrey Canyon* goes aground and breaks up at western entrance to English Channel, releasing oil that pollutes coasts of southwest Britain and Normandy (France).

19—French Somaliland, in a referendum on independence, chooses to continue its association with France.

21—Secret exchange of letters between U. S. President Johnson and North Vietnamese President Ho Chi Minh is revealed; Ho rejected Johnson's proposal for peace talks.

23–27—Military junta seizes control in bloodless coup in Sierra Leone after post-election controversy; Lt. Col. Andrew Juxon-Smith is named chairman of an 8-man National Reformation Council.

31—First U. S.-USSR consular treaty since the Russian Revolution is signed by President Johnson.

APRIL

14—Summit meeting of the Organization of American States (OAS) at Punta del Este, Uruguay, ends with agreement to form a Latin American common market by 1985.

19—Former West German Chancellor Konrad Adenauer dies in Rhöndorf, West Germany, at age 91.

21—Military junta seizes control in Greece.

21—Svetlana Alliluyeva, daughter of late Soviet dictator Joseph Stalin, takes up residence in the U. S. after having defected to the West (March 6) while on a visit to India.

24—Soviet cosmonaut Vladimir M. Komarov becomes the first known casualty of an actual space mission, when his spacecraft crashes on re-entry.

MAY

6—Vice President Dr. Zakir Husain is elected president of India, succeeding Sarvepalli Radhakrishnan, who declined to run for reelection.

15—Kennedy Round negotiators of the General Agreement on Tariffs and Trade (GATT) reach agreement in Geneva on marked reductions in import duties.

18—UN Secretary-General U Thant orders withdrawal of UN peace-keeping forces from the United Arab Republic-Israel border at UAR President Nasser's demand.

19—UN General Assembly votes to establish a UN council and a UN commissioner to administer South West Africa; South Africa claims the territory under a League of Nations mandate terminated by the UN in 1966.

22—UAR closes the Gulf of Aqaba to Israeli shipping.

26—Seventh-largest known diamond is found on a small claim in northeastern Lesotho.

30—Eastern Region of Nigeria declares itself the independent Republic of Biafra.

30—Anguilla secedes from the associated state of St. Kitts-Nevis-Anguilla in the Commonwealth of Nations.

JUNE

5–10—In a 6-day war, Israel defeats the Arab states, occupying most of Egypt's Sinai Peninsula and Gaza Strip, Jordanian territory west of the Jordan River (including Old Jerusalem), and the heights of southwestern Syria; UN Security Council adopts 3 cease-fire resolutions.

9–10—UAR President Nasser resigns, then bows to "people's will" and decides to remain in office.

13—President Johnson appoints Thurgood Marshall the first Negro associate justice of the U. S. Supreme Court.

17—Communist China announces that it has successfully exploded its first hydrogen bomb.

23, 25—President Johnson and Soviet Premier Kosygin hold "useful" talks on a wide range of issues at Glassboro, N. J., during Kosygin's visit to the United States to address the UN on the Mideast situation.

26—U. S. and Panamanian negotiators reach agreement (subject to ratification) on new treaties governing the Panama Canal and Canal Zone.

29—Kenya breaks diplomatic relations with Communist China, charging interference in its internal affairs.

30—Plane carrying Moïse Tshombe, exiled former premier of the Congo (Kinshasa), is forced to land in Algeria.

JULY 1967

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SEPT. 1967

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OCT 1967

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DEC. 1967

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JULY

6—Fighting erupts between Nigerian federal forces and Biafran troops.

12–17—Six days of rioting in Negro section of Newark, N. J., results in 26 deaths and widespread devastation.

18—Britain announces it plans a staged military withdrawal from Southeast Asia by the mid-1970's.

21—Former Zulu Chief Albert Luthuli, winner of the Nobel Peace Prize for 1960, dies in South Africa.

23–30—Eight days of rioting in Detroit result in death toll of 43 and damage estimated above $150 million; at the request of Michigan Gov. George W. Romney, President Johnson authorizes (July 24) sending of federal troops to aid National Guard and local and state police.

24–26—French President de Gaulle, in Montreal, calls for a "Free Quebec"; cuts short his official visit after rebuke by Canadian Prime Minister Lester B. Pearson.

AUGUST

4—Czechoslovakia and West Germany establish diplomatic relations on the consular level.

10—First conference of the Communist revolutionary Organization of Latin American Solidarity, in Havana, Cuba, ends with the adoption of a manifesto supporting revolutions and condemning U. S. "imperialism" and "reactionary" Latin American regimes.

22—Communist Chinese Red Guards invade, burn, and sack British diplomatic compound in Peking.

24—U. S. and USSR jointly present to the 18-nation UN Disarmament Committee in Geneva identical but incomplete drafts of a treaty outlawing the proliferation of nuclear weapons.

31—Malaysia and Indonesia establish diplomatic relations.

SEPTEMBER

3—Nguyen Van Thieu becomes president and Nguyen Cao Ky, vice president in South Vietnamese elections.

8—Uganda officially becomes a republic under a new constitution, which confers broad powers on the president.

10—Voters in British colony of Gibraltar reject Spanish rule in a British-sponsored referendum.

18—United States announces plans to deploy a limited missile defense system against the possibility of attack by Communist China.

22–24—OAS foreign ministers, meeting in Washington, adopt new anti-Cuban policies and agree on steps to fight subversion within the hemisphere.

OCTOBER

4—Nigerian troops capture Biafran capital of Enugu.

5—India announces that it suffered 251 casualties in recent border clashes with Communist China.

10—Bolivian army confirms the capture (Oct. 8) and death of Cuban insurrectionist Ernesto (Che) Guevara.

12—U. S. Secretary of State Dean Rusk declares that U. S. security is at stake in Vietnam.

18–19—Separate Soviet and U. S. Venus probes transmit data on planet's atmosphere.

21—Thousands protesting the Vietnam War are repulsed by marshals and soldiers at the Pentagon in Washington.

21—UAR missiles sink the Israeli destroyer *Elath*.

24—Israel shells UAR oil installations in Suez city.

26—Shah of Iran crowns himself and Empress Farah.

28—Kenya and Somalia agree to curb their border war and restore diplomatic ties.

28—Mexican and U. S. presidents participate in ceremonies restoring to Mexico the contested El Chamizal area, formerly part of Texas.

29—Expo 67 ends 211-day run in Montreal, Canada, with total attendance of 50,306,648.

30—Two unmanned Soviet spaceships dock in orbit.

NOVEMBER

4—Congolese troops capture Bukavu, stronghold of mercenaries and Katangese rebels.

5—Abdul Rahman al-Iryani becomes provisional head of Yemen after President Abdullah al-Salal is overthrown.

9—U. S. Saturn 5, world's biggest known rocket, orbits unmanned Apollo spacecraft.

18—British pound is devalued 14.3% to U. S.$2.40.

22—UN Security Council unanimously adopts a British-sponsored framework for peace in the Middle East.

30—Former British territories of Aden and South Arabia become a single independent state, the People's Republic of South Yemen.

DECEMBER

2—Francis Cardinal Spellman, cardinal in the Roman Catholic Church and leader of the New York archdiocese, dies.

3—Greece and Turkey reportedly reach an accord averting war over Cyprus.

3—South African surgeon Dr. Christiaan Barnard performs the world's first human heart transplant.

8—Last UAR troops leave Yemen.

13–14—King Constantine of Greece unsuccessfully attempts to oust the military junta; goes into exile in Rome.

17—Australian Prime Minister Harold Holt disappears while swimming in dangerous surf off Portsea, Victoria.

17–18—Military coup overthrows government of President Christophe Soglo in Dahomey; Maj. Maurice Kouandete becomes head of state.

CHRONOLOGY • PART 2

TOPICAL SURVEY OF THE YEAR

This survey is a selected chronology of the year's most significant events. The important events of 1967 are listed in chronological order under their appropriate subject headings. This manner of presentation allows the reader to review quickly the events of the past year in any single subject. A special emphasis has been laid on both national and international political developments. Articles on all the countries, persons, organizations, and fields of interest listed here will be found in the main text of this volume. Main subject headings are listed in alphabetical order. The cross references refer only to headings within this survey.

ACCIDENTS AND DISASTERS—See Alaska; Belgium; Brazil; Colombia; Turkey; Venezuela

ADENAUER, Konrad
- Former West German chancellor dies in Rhöndorf, West Germany, at age 91, **April 19**

AFRICA
- French Somaliland chooses to continue its association with France in a referendum on independence, **March 19**
- Tenth military coup in two years occurs in Sierra Leone, **March 23**
- UN General Assembly adopts resolution providing for UN administration, through an 11-member council, of South West Africa (South Africa's mandate over that territory was terminated by the UN in 1966), **May 19**
- Eastern Region of Nigeria declares itself the independent Republic of Biafra, **May 30**
- Kenya, Tanzania, and Uganda negotiate a 15-year treaty establishing an East African Community and a Common Market, **June 6**
- Moïse Tshombe, exiled former premier of the Congo (Kinshasa), is kidnapped when his plane is hijacked over the Mediterranean and forced to land in Algeria, **June 30**
- Organization of African Unity (OAU) heads of state convene in Kinshasa, Congo; set up a 6-nation mission to negotiate a settlement of the Nigerian civil war; demand withdrawal of rebellious white mercenaries from the Congo under an amnesty plan, **Sept. 11–14**
- Nigerian federal troops capture Biafran capital of Enugu, **Oct. 4**
- Mercenaries and their Katangese allies reportedly flee Congo to Rwanda after Congolese army closes in on their stronghold of Bukavu, **Nov. 5**

ALABAMA
- Mrs. George C. Wallace is inaugurated as state's first woman governor, succeeding her husband, **Jan. 16**
- Three-judge federal court invalidates 1965 tuition grant law for private schools; orders governor and education officials to "take affirmative action" toward integrating public schools, **March 22**

ALASKA
- More than 18,000 persons evacuate city of Fairbanks in serious flooding of Chena River, **Aug. 14–15**

ALGERIA
- Government severs ties with the United States over its alleged role in the Israeli-Arab war, **June 6**
- Algerian supreme court approves the extradition of ex-Premier Moïse Tshombe of the Congo (Kinshasa), whose plane was hijacked and diverted to Algeria June 30, but Tshombe remains imprisoned in Algeria, **July 21**
- Government of President Houari Boumedienne crushes a coup attempt by former Army Chief of Staff Col. Tahar Zibiri, **Dec. 15**

ARGENTINA
- A "civil defense" law gives the government the right to mobilize all residents over 14 years of age, **March 4**
- A new law for governing the national universities is announced, **April 22**
- An anti-Communist law is enacted, **Aug. 25**

ARKANSAS
- Winthrop Rockefeller becomes first Republican governor since Reconstruction era, **Jan. 10**

ASIA
- Allies of South Vietnam hold strategy conference at Guam; resolve "to defend freedom in South Vietnam and at the same time to continue the earnest search for an honorable peace," **March 20–21**
- Communist China announces detonation of its first fully thermonuclear device, reportedly a 1-megaton hydrogen bomb, **June 17**
- Britain announces it plans staged military withdrawal from Southeast Asia by the mid-1970's, **July 18**
- Thailand, the Philippines, Indonesia, Malaysia, and Singapore establish a new regional economic organization, the Association of Southeast Asian Nations, **Aug. 8**
- Indian government announces that it suffered 251 casualties in clashes with Communist Chinese troops on the Sikkim-Tibet border, **Oct. 5**
- Indonesia suspends relations with Communist China, **Oct. 9**

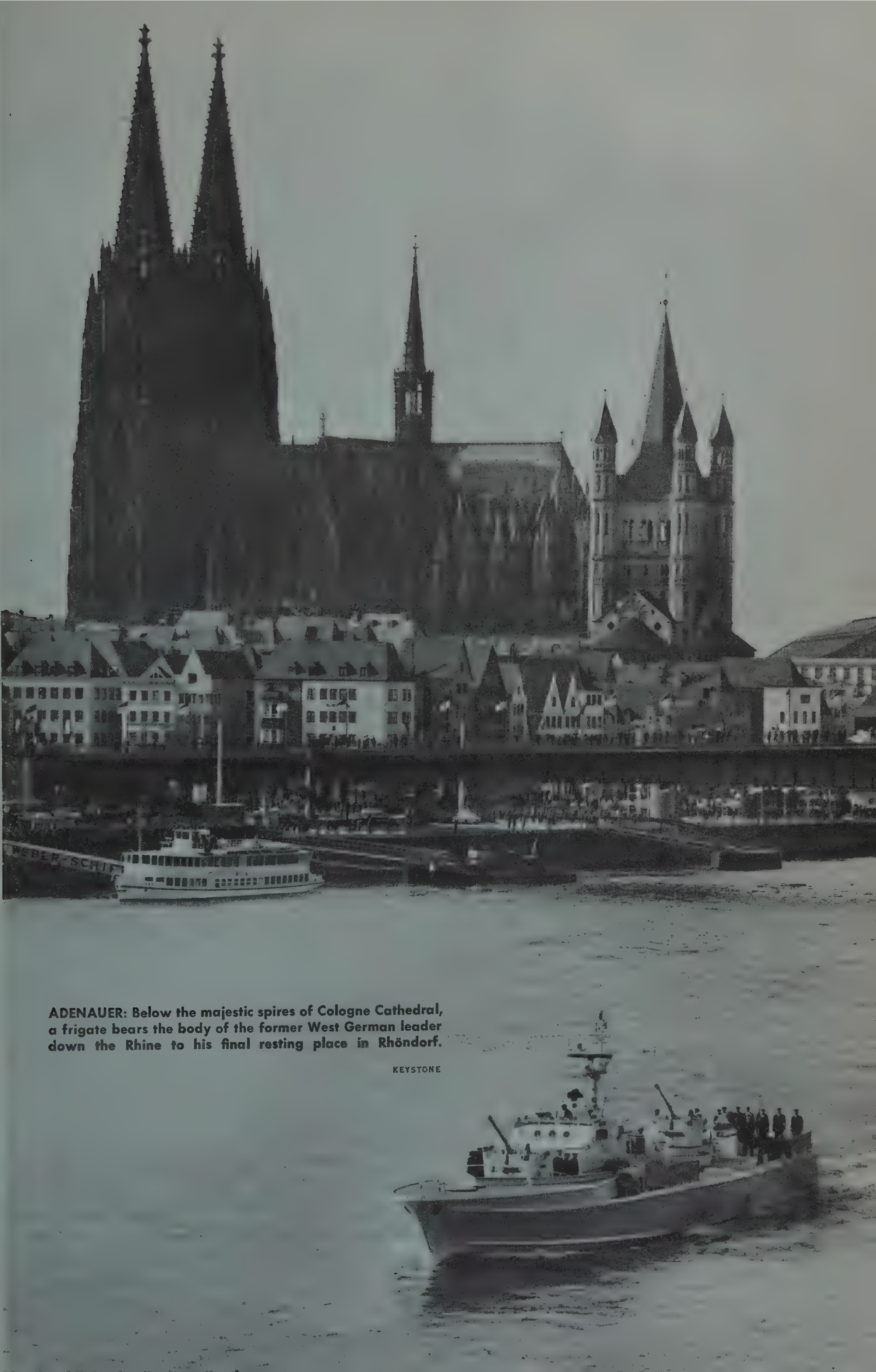
ASTRONOMY—See Space Exploration

ATOMIC ENERGY—See also United Nations
- Largest commercial U. S. nuclear electrical plant begins operation at San Onofre, Calif., **June 14**
- Communist China announces successful detonation of its first fully thermonuclear device, reportedly a 1-megaton hydrogen bomb, **June 17**
- U. S. Atomic Energy Commission chairman Glenn Seaborg announces creation of mendelevium-258, heaviest isotope, at Lawrence Radiation Laboratory, **Sept. 10**
- Soviet Union announces operation of world's most powerful accelerator at Serpukhov, near Moscow, **Oct. 9**
- Atoms For Peace Award presented to W. B. Lewis of Canada, I. I. Rabi of the United States, and B. L. Goldschmidt of France, **Nov. 14**
- World's first commercial thermonuclear explosion, Project Gasbuggy (to increase U. S. gas reserves), is carried out successfully in New Mexico, **Dec. 10**
- Communist China conducts seventh nuclear test, **Dec. 24**

ATTLEE, Clement
- Former British prime minister (1945–51) dies in London at age 84, **Oct. 8**

AUSTRALIA
- South Vietnamese Premier Nguyen Cao Ky's tour of Australia is marred by protest rallies staged by antiwar demonstrators, **Jan. 18–22**
- In Washington, Prime Minister Harold Holt confers with President Johnson; reaffirms his government's support of the United States in the Vietnam War, **June 1**
- In Canberra, U. S. Gen. Maxwell D. Taylor and Clark Clifford, a presidential adviser, meet with Australian leaders for policy discussions on Vietnam, **July 30**
- Prime Minister Holt announces Australia's decision to increase its Vietnam troop commitment from 6,300 to more than 8,000 men, **Oct. 16**
- Coalition government of Prime Minister Holt fails to regain a majority in Senate elections, **Nov. 25**
- Prime Minister Holt disappears while swimming in dangerous surf off Portsea, Victoria, **Dec. 17**
- John McEwen, deputy prime minister, is sworn in as Holt's temporary successor, **Dec. 19**
- President Johnson and other leaders attend memorial services for Prime Minister Holt in Melbourne, **Dec. 22**

AUSTRIA
- Bruno Kreisky, former foreign minister, is elected leader of the Socialist party, succeeding Bruno Pittermann, **Feb. 1**
- During visit to Soviet Union, Austrian Chancellor Josef Klaus holds talks with Soviet Premier Aleksei Kosygin; Klaus announces that USSR still opposes Austria's admission to the Common Market, **March 20**



ADENAUER: Below the majestic spires of Cologne Cathedral, a frigate bears the body of the former West German leader down the Rhine to his final resting place in Rhöndorf.

KEYSTONE

UPI

CANADA: Governor General Roland Michener (*right*) talks with President de Gaulle in Quebec's Citadel, on July 23.

Terrorist activity breaks out on the Austrian-Italian border in the South Tyrol, **June 25**

BELGIUM

NATO military headquarters (Supreme Headquarters, Allied Powers, Europe) opens at Casteau, **March 31**

More than 300 persons are killed or injured as fire destroys large department store in Brussels, **May 22**

Military aid to the Democratic Republic of Congo is cut off, and all Belgian judges are withdrawn from Congolese courts as a result of loss of Belgian property and lives in uprisings, **July 28**

Government holds up technical assistance to the Congo as a result of strained relations, **Aug. 28**

NATO political headquarters opens in Evere, a suburb of Brussels, **Oct. 15**

BOLIVIA

Revolutionary guerrilla forces discovered in the southeastern jungles near Sucre, **March 23**

Communist party and leftist Workers Revolutionary party are banned, **April 12**

The Bolivian government imposes a state of siege, and constitutional guarantees are suspended, **June 7**

Ernesto (Che) Guevara, Cuban leader of the guerrilla forces, is allegedly killed by Bolivian government forces, **Oct. 9**

Jules Régis Debray, French leftist intellectual, is sentenced to 30 years in Bolivian military prison for alleged participation in guerrilla activities, **Nov. 17**

BOSTON

Demonstration over welfare procedures turns into riot in predominantly Negro Roxbury section of Boston; at least 68 persons are injured, **June 3–5**

Roxbury community holds self-help mass meetings, **June 6–7**

Kevin H. White is elected mayor over Mrs. Louise Day Hicks, opponent of enforced school desegregation, in nonpartisan municipal election, **Nov. 7**

BRAZIL

New constitution is approved by Congress, replacing liberal charter of 1946; new press-control law contains sweeping curbs on all news media, **Jan. 22**

Landslides caused by record rainfalls kill over 890 persons in hillside slums surrounding Rio de Janeiro, **Jan. 22–24**

President-elect Artur da Costa e Silva pays state visit to United States, **Jan. 25–31**

Government decrees 2-day bank holiday to start currency reforms, **Feb. 8**

New cruzeiros, valued at U. S.$0.3683, go into circulation, **Feb. 13**

Costa e Silva is inaugurated as 22d president, **March 15**

BURMA

Anti-Chinese rioting in Rangoon and other cities follows Chinese students' defiance of Burmese ban on Maoist-type revolutionary groups, **June 27–29**

China terminates economic aid, **July 7**

Burmese government releases former President U Win Maung and other political prisoners, **Oct. 12**

CALIFORNIA

Ronald Reagan, Republican, is sworn in as governor, succeeding Democrat Edmund G. Brown, **Jan. 2**

Board of Regents of the University of California dismisses president, Clark Kerr, without advance notice, **Jan. 20**

Kenneth Young, 11, of Beverly Hills is returned unharmed by a kidnapper after four days for $250,000 ransom, **April 6**

City of Long Beach acquires Cunard liner *Queen Mary* for use as maritime museum and hotel, **July 26**

Mrs. Shirley Temple Black runs second to fellow Republican Paul N. McCloskey, Jr., in special congressional election, **Nov. 14**

State supreme court stays all executions pending hearings in death penalty cases in early 1968, **Nov. 14**

CAMBODIA

Pro-Communist China rebels stage a revolt in Pailin, in Battambang province; 48 persons are arrested, **April 3–7**

Chief of State Prince Norodom Sihanouk forms a new cabinet with Son Sann as premier, **May 2**

Mrs. John F. Kennedy is greeted by Sihanouk on her arrival for a 6-day personal visit to Cambodia, **Nov. 2**

Two U. S. newsmen report their discovery of a Vietcong base camp inside the Cambodian border; Sihanouk denies the camp's existence, **Nov. 20**

CANADA—See also Expo 67

Gov.-Gen. Georges P. Vanier dies at 78, **March 5**

Roland Michener takes office as the 20th governor-general of Canada, **April 17**

Prime Minister Lester B. Pearson presides over inauguration ceremonies at world's fair Expo 67 in Montreal, **April 27**

Queen Elizabeth and Prince Philip pay a state visit to Ottawa and Expo 67 for Dominion Day (July 1) festivities, **June 29–July 5**

President Charles de Gaulle of France, on a state visit, calls for a "Free Quebec" during reception at Montreal, **July 24**

Prime Minister Pearson rebukes de Gaulle for encouraging Quebec separatism, **July 25**

De Gaulle returns abruptly to France, **July 26**

Winnipeg is host to Pan-American Games, **July 23–Aug. 6**

Robert L. Stanfield, premier of Nova Scotia, is elected leader of Conservative party as former Prime Minister John Diefenbaker is eliminated from race, **Sept. 9**

Pearson announces his retirement, to become effective as soon as a successor is chosen to lead the Liberal party, **Dec. 14**

Liberal party officials announce a leadership conference to be held April 4–6, 1968, at Ottawa, **Dec. 17**

Vincent Massey, 18th governor-general of Canada, dies at age 80, **Dec. 30**

CHILE

Chilean Senate vetoes, by a vote of 23 to 15, President Eduardo Frei's request to visit United States, **Jan. 17**

Ruling Christian Democrats receive only 36.5% of the votes in municipal elections, **April 2**

National Council of the Christian Democratic party passes declaration condoning guerrilla warfare against unjust regimes, **July 11**

President Frei signs Agrarian Reform Law, **July 16**

Chile officially condemns Cuban aggression in South America, **Sept. 13**

General labor strike to protest government compulsory savings plan results in 5 deaths and arrests of several union leaders, **Nov. 23**

CHINA, Communist—See also Communism; Hong Kong

Former Propaganda Minister T'ao Chu is publicly criticized by Maoists, **Jan. 14**

Following the January 25 "battle of Red Square" in Moscow (when Chinese students clashed with the Soviet police) and the storming of the Soviet embassy in Peking, Communist China and the Soviet Union end the agreement that permitted citizens to travel between the two countries without visas, **Feb. 10**

The first official attack on Chairman Liu Shao-ch'i is launched, **March 31**

China announces that it has successfully exploded its first hydrogen bomb, **June 17**

Red Guards invade the British embassy in Peking, set fire to buildings, and beat staff members, **Aug. 22**

Fighting breaks out between Chinese and Indians at Natu La pass on the Tibet-Sikkim border, **Sept. 11**

Indonesia suspends diplomatic relations with Communist China, **Oct. 9**

CHINA, Nationalist

President Chiang Kai-shek establishes the National Security Council, replacing the National Defense Council, with himself at the head, **Feb. 2**

Vice President and Premier Yen arrives in Washington, D. C., for a 19-day official visit, **May 9**

CIVIL RIGHTS—See also UNITED STATES

In his State of the Union message, President Johnson calls for legislation to desegregate housing and juries and to provide federal protection to civil rights workers, **Jan. 10**

President Johnson appoints Thurgood Marshall the first Negro associate justice of the Supreme Court, **June 13**

Black Power conference in Newark, N. J., includes representatives of 196 civil rights groups from 42 cities, **July 20–24**

All-white Mississippi jury convicts 7 of 18 white defendants in 1964 civil rights killings, **Oct. 20**

Cleveland and Gary, Ind., elect Negroes as mayors; opponent of desegregation by busing defeated in Boston's mayoral race, **Nov. 7**

CLEVELAND

Carl B. Stokes, Negro Democrat, is elected mayor, defeating Republican Seth Taft by narrow margin, **Nov. 7**

COLOMBIA

Village of Guacamayas is wiped out, and 100 persons are killed, in worst earthquake in 50 years, **Feb. 9**

Special session of Congress fails to pass reforms of President Carlos Lleras Restrepo, **July 20**

Liberal factions backing President Lleras are formally united in a single party, **Oct. 20**

COMMONWEALTH OF NATIONS

St. Kitts-Nevis-Anguilla and Antigua become associated states, **Feb. 27**

St. Lucia and Dominica become associated states, **March 1**

Grenada becomes an associated state, **March 3**

Queen Elizabeth II opens Southeast Asia Commonwealth Cable, **March 30**

Arab nationalist riots attend visit of UN fact-finding mission to Aden, **April 2–7**

Anguilla secedes from the associated state of St. Kitts-Nevis-Anguilla, **May 30**

Residents of Gibraltar vote to reject return to Spanish sovereignty, **Sept. 10**

British government agrees to grant independence to colony of Mauritius in 1968, **Oct. 24**

Aden and South Arabia become a single independent state, the People's Republic of South Yemen, **Nov. 30**

COMMUNISM

Top Soviet leaders join party members in meetings throughout USSR to stimulate support for hard-line policy toward Communist China, **Jan. 4–14**

French Communists conclude 18th party congress; final resolution denounces Communist China and calls for world conference of Communist parties, **Jan. 8**

Foreign ministers of Warsaw Pact nations end 3-day meeting in Warsaw; consider closer ties with West Germany; fail to reach consensus on convening world Communists to deal with questions of Communist China, **Feb. 10**

Meeting of eastern European parties at Karlovy Vary, Czechoslovakia, fails to produce censensus for a world conference of parties, **April 24–26**

Communist China rejects bid by Soviet party secretary Leonid I. Brezhnev (April 18) for Communist world conference, **April 30**

Latin American Communists convene first conference of Organization of Latin American Solidarity; split appears between Soviet orthodoxy and Cuban-style revolutionism, **July 31–Aug. 10**

Soviet party newspaper *Pravda* urges overthrow of Mao Tse-tung in China, **Sept. 16**

CONGO, Democratic Republic of

Government sets up new firm, Société Générale Congolaise des Minerais (GECOMIN), to administer expropriated assets of Belgian Union Minière, **Jan. 1**

Military court sentences former Premier Moïse Tshombe, in European exile, to death, in absentia, for high treason, **March 13**

New constitution is approved by 90% of the voters in a referendum, **June 4–14**

Plane carrying Tshombe is hijacked and taken to Algeria, where he is placed under arrest, **June 30**

White mercenaries and Katangese gendarmes launch armed rebellion, **July 5**

Summit conference of Organization of African Unity is held in Kinshasa, **Sept. 11–14**

Government announces the capture by Congolese troops of Bukavu, in which rebels have been entrenched since August, **Nov. 4**

CONGRESS, U. S.—See UNITED STATES

CUBA

Havana releases message from Ernesto (Che) Guevara, former Cuban official, from "somewhere in the world" calling for guerrilla warfare on a continental scale, **April 16**

Soviet Premier Aleksei Kosygin visits Havana and consults with Premier Fidel Castro, **June 26–30**

Premier Castro warns Cubans that if the United States attacks the island "we must . . . fight alone," **July 26**

First conference of the revolutionary Organization of Latin American Solidarity is held in Havana, **July 31–Aug. 10**

Castro confirms the death of Guevara in Bolivia, **Oct. 15**

CYPRUS

Communal fighting breaks out between Greek Cypriot National Guard and Turkish Cypriots; total of 28 are killed; Turkey threatens war, **Nov. 15–16**

UN Secretary-General U Thant appeals to Cyprus, Greece, and Turkey for restraint and dispatches his emissary, José Rolz-Bennett; President Johnson appoints Cyrus R. Vance as special envoy to seek agreement, **Nov. 22**

Cyprus, Greece, and Turkey respond favorably to U Thant's appeal for peace, **Dec. 3**

The first contingent of Greek troops quits Cyprus under the Greek-Turkish agreement to resolve crisis, **Dec. 8**

CZECHOSLOVAKIA

New Economic Model, a drastic reform in the nation's economy, goes into operation; controversial Press Law, placing the press under the control of the ministry of education and culture and setting up a new central administration for publications, goes into effect, **Jan. 1**

Friendship treaty is signed with Poland, **March 1**

East German leader Walter Ulbricht signs Czech–East German friendship treaty in Prague, **March 17**

President Antonín Novotný condemns anticensorship stand of Writers' Union, **Jan. 30**

Czechoslovakia and West Germany establish diplomatic relations on the consular level, **Aug. 4**

DAHOMEY

Young army officers, mostly northerners, overthrow the government of President Christophe Soglo; provisional government is set up, with Maj. Maurice Kouandété as head of state and minister of defense; elections are promised in about six months, **Dec. 17–18**

DE GAULLE, Charles—See also FRANCE

Confers briefly in Bonn with President Johnson at funeral of Konrad Adenauer, **April 25**

Attends meeting of Common Market heads of state in Rome, **May 29–30**

Meets in Paris with Soviet Premier Kosygin, who is en route to New York and Cuba, **June 16**

Meets in Paris with British Prime Minister Wilson, who presses Britain's suit to join Common Market, **June 19**

Visits Canada; announces support for French-Canadian separatist movement; leaves abruptly after official reprimand from Prime Minister Pearson, **July 23–26**

Pays state visit to Poland; suggests two countries make joint effort to end the war in Vietnam, **Sept. 6–12**

Speaking at semiannual news conference, states opposition to British entry into Common Market on any terms; renews plea for an independent Quebec; urges return to gold as basic medium of international finance, **Nov. 27**

DENMARK

Denmark applies for membership in the European Economic Community, **May 11**

Princess Margrethe is married to Henri de Monpezat, a French count, **June 10**

Copenhagen's 800th anniversary is observed, **June 10**

Hans Tabor formerly Danish ambassador to the United Nations, becomes foreign minister and is succeeded at the United Nations by Otto R. Borch, **Oct. 2**

The Danish krone is devalued by 7.9%, **Nov. 21**

Prime Minister Jens Krag resigns and calls for new elections on Jan. 23, 1968, **Dec. 15**

DETROIT

Rioting begins in Negro section of city; Michigan Gov. George Romney orders 1,500 National Guardsmen into Detroit as violence spreads, **July 23**

Romney asks for and receives federal troops from President Johnson to help restore order, **July 24**

State of emergency ends with final death toll set at 43 and property damage estimated at $150 million, **Aug. 6**

Public school teachers return to jobs after 9-day strike, accepting contract with pay increases of $1,700 over 2-year period, **Sept. 18**

UPI

CIVIL RIGHTS: National Guardsmen advance on rioting Negroes in Detroit, July 26, as a building burns in the background. Detroit suffered the year's worst riot.

DOMINICAN REPUBLIC

A plot to overthrow President Joaquín Balaguer is uncovered; several leftist leaders are arrested, **Jan. 23**

Members of the opposition Dominican Revolutionary party walk out of Congress to protest an alleged bomb attack on one of their senators, Rafael Casimiro Castro, **May 7**

Balaguer juggles the military and police commands, **Sept. 8**

ECUADOR

President Otto Arosemena Gómez refuses to sign the final declaration of cooperation at the Punta del Este summit meeting of the Organization of American States, in protest against U. S. lending policy, **April 14**

In local elections, center-left candidates win contests in 9 out of 17 of Ecuador's largest cities, **June 11**

U. S. Ambassador Wymberley Coerr is recalled on Ecuador's demand after complaints of his alleged criticism of President Arosemena, **Oct. 8**

EL SALVADOR

Col. Fidel Sánchez Hernández of ruling National Conciliation party is elected president, **March 6**

EUROPE

European Economic Community celebrates 10th anniversary of the Treaties of Rome, establishing Common Market; observance also notes 20th anniversary of Harvard speech by U. S. Secretary of State George C. Marshall proposing plan (the Marshall Plan) for European economic recovery, **March 25**

Industrialized nations complete Kennedy Round tariff negotiations calling for marked reductions in import duties, **May 15**

Gibraltar votes to continue its association with Britain, rejecting Spanish claims of sovereignty, **Sept. 10**

USSR and other Communist countries of eastern Europe celebrate 50th anniversary of Bolshevik Revolution, **Nov. 7**

EXPO 67

Canadian Prime Minister Lester B. Pearson officially opens Expo 67 in Montreal, **April 27**

Nationalist Chinese pavilion is badly damaged by fire, **May 30**

Queen Elizabeth II tours Expo 67, **July 3**

Strike by Montreal bus and subway drivers cuts attendance at Expo, **Sept. 21–Oct. 14**

Expo 67 ends 211-day run with cumulative attendance of 50,306,648, **Oct. 29**

FLORIDA

Special 3-judge federal court imposes new districting plan to replace 1966 reapportionment law, **Feb. 8**

Republicans increase Senate seats from 11 to 20, House seats from 26 to 39, in special election held under new apportionment law, **March 28**

Two days of rioting in the Negro section of Tampa result in one death, 86 arrests; National Guard and local police restore order, **June 12**

FRANCE—See also De Gaulle, Charles

Gaullists lose 40 seats in National Assembly in runoff elections, but retain a majority, **March 12**

Flag-lowering ceremony formally marks the departure of U. S. troops from French soil, **March 14**

Following a referendum (March 19) in favor of continued French control, natives of French Somaliland riot in Djibouti, the capital; 11 are killed, **March 20**

NATO supreme Allied command (SHAPE) leaves Rocquencourt headquarters for Belgium, **March 30–31**

President de Gaulle reappoints Georges Pompidou premier; Pompidou had resigned on April 1 to allow the cabinet to vote in crucial test for Assembly speaker, **April 6**

A 24-hour general strike ties up entire nation, **May 17**

Soviet Premier Aleksei N. Kosygin visits de Gaulle en route to and from New York, **June 16, July 1**

De Gaulle visits Quebec, Canada; outrages most Canadians by supporting Quebec separatists, **July 24–26**

At news conference, de Gaulle unequivocally opposes Britain's entry into Common Market, **Nov. 27**

GABON

President Léon M'ba and Vice President Albert Bongo are reelected, **March 19**

M'ba dies in a Paris hospital, **Nov. 28**

Bongo is sworn in as president, **Dec. 4**

GANDHI, Indira—See India

GEORGIA

Segregationist Lester G. Maddox, a Democrat, who made headlines in 1964 by barring his restaurant to Negroes in defiance of the Civil Rights Act, is elected governor by state legislature, **Jan. 10**

GERMANY—See also Kiesinger

Chancellor Kurt Georg Kiesinger and French President Charles de Gaulle end 2-day meeting in Paris; agree to coordinate policies in eastern Europe and to "consult" on steps to reduce international tensions, **Jan. 14**

At Bonn, Foreign Minister Willy Brandt and Rumanian Foreign Minister Corneliu Mănescu announce agreement to exchange ambassadors, **Jan. 31**

East German Communist party leader Walter Ulbricht, visiting in Warsaw, signs 20-year military pact with Polish Communist party leader Władysław Gomułka, **March 15**

In Prague, Ulbricht signs "friendship and support" treaty with Czech President Antonín Novotný, **March 17**

CANADIAN INFORMATION OFFICE

EXPO 67: Overhanging angular roof of the Soviet pavilion (*right*) contrasts with the geodesic dome of the U. S. exhibit at the highly successful world's fair in Montreal.

In response to West German appeals for improved relations, Ulbricht proposes a meeting between Chancellor Kiesinger and East German Premier Willi Stoph, **April 18**

World leaders attend state funeral for former West German Chancellor Konrad Adenauer (died April 19) in Cologne, **April 25**

Chancellor Kiesinger meets with President Johnson in Washington; they agree to consult with Allies before deciding on reducing or redeploying U. S. or West German forces in Europe, **Aug. 15–16**

Chancellor Kiesinger offers high-level talks, but no summit meeting, to East Germans, **Sept. 29**

Klaus Schütz, a Social Democrat, is elected mayor of West Berlin to succeed Social Democrat Heinrich Albertz (who resigned Sept. 26), **Oct. 19**

GHANA

Ghana's First International Trade Fair is held in Accra, **Feb. 1–20**

Attempted coup by an army squadron is crushed, **April 17**

National Liberation Council announces creation of 17-member Executive Council, including 14 civilians, **June 30**

GREAT BRITAIN—See also Commonwealth of Nations; Wilson

Jeremy Thorpe is elected Liberal party leader, succeeding Jo Grimond, who resigned Jan. 17, **Jan. 18**

Prime Minister Harold Wilson confers in London with Soviet Premier Aleksei N. Kosygin; joint communiqué pledges efforts to achieve peace in Vietnam, **Feb. 6–13**

Beaches of southern England are reported polluted by tons of crude oil from the tanker *Torrey Canyon*, which went aground and broke up off Land's End on March 18, **March 26–30**

Conservatives make big gains in local elections in England and Wales, **April 13**

Britain formally applies for membership in European Economic Community (EEC) after extensive preliminary diplomatic travels by Prime Minister Wilson, **May 10**

Joins United States in expressing determination to remain neutral in Israeli-Arab conflict, **June 5**

Announces plans to withdraw from bases in Singapore and Malaysia by mid-1970's, **July 18**

Chinese Red Guards invade, burn, and sack British diplomatic compound in Peking, **Aug. 22**

Wilson assumes responsibility for economic affairs as part of major shuffle of his government, **Aug. 28**

Queen Elizabeth christens *Queen Elizabeth II*, Cunard luxury liner, at Clydebank, Scotland, **Sept. 20**

Labourites lose to Conservatives in two by-elections, reducing Labour's parliamentary majority to 86, **Sept. 21**

Queen Elizabeth opens Parliament; pledges to end hereditary basis of membership in House of Lords, **Oct. 31**

Pound is devalued 14.3% from U. S.$2.80 to U. S.$2.40 to overcome economic crisis; Bank of England raises bank rate, which had been lowered earlier in the year, to 8%; severe economic restraints are imposed, **Nov. 18**

Labour government wins vote of confidence in House of Commons on decision to devalue pound, **Nov. 22**

Power shift in government indicates moves to new economic policies; Home Secretary Roy Jenkins and Chancellor of the Exchequer James Callaghan exchange posts, **Nov. 29**

GREECE

Premier John Paraskevopoulos resigns after losing majority in parliament, **March 30**

King Constantine II names Panayotis Kanellopoulos as the new premier, **April 3**

Premier Kanellopoulos dissolves parliament and orders national elections on May 28, **April 14**

A military coup, led by Lt. Gen. Gregory Spandidakis, Col. George Papadopoulos, Brigadier Stylianos Patakos, and Col. Nicholas Makarezos, takes control of the government; Constantine V. Kollias, a civilian backed by the king, becomes premier, **April 21**

A son and heir, Prince Paul, is born to King Constantine and Queen Anne-Marie, **May 20**

First contingent of Greek soldiers leaves Cyprus under terms of agreement between Greece and Turkey to resolve the November crisis over Cyprus, **Dec. 8**

King Constantine unsuccessfully attempts to dismiss the military junta and to rally the country behind him; he and his family flee to Rome; Colonel Papadopoulos becomes premier and foreign minister; Gen. George Zoitakis is named regent, **Dec. 13–14**

Premier Papadopoulos and two other junta leaders resign from the army to become civilians, **Dec. 20**

GUINEA

President Sékou Touré orders all foreign clergymen to leave Guinea, **May 1**

Guinea seizes Ivory Coast trawler and interns its personnel, **Feb. 17**

President Touré releases Ivoirien prisoners after the Ivory Coast retaliates by seizing a group of Guinean diplomats, **Sept. 21**

HONG KONG

Thousands of pro-Communist youths join strikers in riots and demonstrations against the British presence in the crown colony, **May 11–22**

Hong Kong police, border guards, and Chinese Communist demonstrators clash on Hong Kong-Chinese border; 9 are dead and at least 11 wounded, **July 8**

PARIS MATCH, FROM PICTORIAL PARADE

GREECE: King Constantine wipes his brow at a public appearance soon after a junta seized the government in April.

HUMPHREY, Hubert H.

U. S. vice president asks for new "Marshall Plan" to aid impoverished areas of United States, **Aug. 2**

Arrives in Saigon, South Vietnam, as U. S. representative at inauguration of President-elect Nguyen Van Thieu; tours combat areas, **Oct. 29–Nov. 1**

Returns from 11-day Southeast Asian tour (that included visits to Malaysia and Indonesia), and is encouraged by "appreciation of the American effort in Vietnam," **Nov. 7**

Arrives in Ivory Coast at start of 13-day tour of eight African nations, **Dec. 30**

HUNGARY

General elections are held in which voters are allowed some choice of candidates, **March 19**

Pál Losonczi takes office as chairman of presidential council; Jenő Fock becomes premier, **April 14**

Hungary breaks diplomatic relations with Israel; supports Arab cause, **June 12**

Hungarian and Soviet leaders sign 20-year treaty of cooperation, friendship, and mutual assistance in Budapest, **Sept. 7**

INDIA

Congress party is returned to power in national elections, but with a greatly reduced majority, **Feb. 24**

Prime Minister Indira Gandhi is reelected; pledges to continue policy of "democratic socialism," **March 12**

Central government suspends legislature in strife-torn Rajasthan; state is placed under presidential rule, **March 13**

Presidential rule ends in Rajasthan as new Congress party state government is sworn in, **April 26**

Vice President Zakir Husain is elected president of India, succeeding Sarvepalli Radhakrishnan, **May 6**

Government reports 251 casualties in clashes with Communist Chinese troops at Natu La (Sept. 11–14) and Cho La (Oct. 1) on the Sikkim border, **Oct. 5**

Central government ousts unstable opposition state governments in West Bengal and Haryana, **Nov. 21**

INDIANA

Gov. Roger Branigin orders 1,000 National Guardsmen into South Bend on second night of rock throwing and fire-bombing by Negro youths, **July 26**

Richard G. Hatcher, a Democrat, becomes first Negro mayor of Gary, in a close vote, **Nov. 7**

INDONESIA

President Sukarno transfers his executive powers to General Suharto, **Feb. 20**

Indonesia rejoins the International Monetary Fund, **Feb. 21**

Indonesian Congress formally strips Sukarno of all his titles retroactive to Feb. 22, **March 12**

Indonesia reenters the World Bank, **April 13**

A mob of Indonesian youths attacks the Communist Chinese embassy in Djakarta, **Aug. 5**

Indonesia and Communist China suspend diplomatic relations, **Oct. 9**

HOPPER, Edward

U. S. painter, noted for urban scenes, died in New York, at age 84, **May 15**

IRAN

Premier Amir Abbas Hoveida announces agreement with the USSR to purchase $110 million worth of Soviet military equipment, **Feb. 19**

Shah Mohammed Reza Pahlavi arrives in Washington for a 2-day visit; President Johnson praises the economic progress of Iran, **Aug. 22**

Constituent Assembly designates Empress Farah as regent in case of the Shah's death or disability before the majority of Crown Prince Reza, **Sept. 7**

Shah crowns himself and Empress Farah in Teheran, **Oct. 26**

ISRAEL

Israeli jet aircraft clash with Syrian planes, **April 7**

Partial call-up of armed forces begins after United Arab Republic (UAR) troops mass along Sinai border, **May 18**

Premier Levi Eshkol appoints Maj. Gen. Moshe Dayan, hero of the 1956 Sinai campaign, defense minister, **June 1**

During the "Six Days' War," Israel forces the UAR out

PARIS MATCH, FROM PICTORIAL PARADE

IRAN: After 26 years on the throne, the shah crowned himself and Empress Farah, in glittering ceremonies at Teheran, October 26. Crown Prince Reza, the couple's 6-year-old son (*center*), solemnly observes the symbolic rite.

ISRAEL: Overcome by emotion, an Israeli woman prays before the Wailing Wall in Old Jerusalem. The ancient shrine was taken by Jews in the June war.

PARIS MATCH, FROM PICTORIAL PARADE

of the Gaza Strip and the Sinai Peninsula and also occupies Jordanian territory west of the Jordan River, the Old City of Jerusalem, and the Golan heights of Syria, **June 5–10**

Israeli forces sink U. S. communications ship *Liberty* in Mediterranean; 34 crewmen lose lives; Israel calls attack accidental, apologizes, **June 8**

USSR breaks off diplomatic relations with Israel, **June 10**

Israel rejects UN General Assembly resolution requesting annulment of unification of Old and New Jerusalem (merged June 28), **July 11**

First group of Arab refugees of the June war recrosses the Jordan River, **Aug. 18**

UAR, using Soviet rockets, sinks the Israeli destroyer *Elath,* **Oct. 21**

In reprisal, Israel shells UAR oil installations in the port city of Suez, **Oct. 24**

ITALY

Soviet President Nikolai V. Podgorny makes state visit to Italy, **Jan. 24–31**

Visiting U. S. Vice President Hubert Humphrey discusses world problems with Italian leaders, **March 30–April 3**

Leaders of the Common Market countries arrive in Rome to discuss Britain's bid for membership, **May 29**

Elections are held in Sicily; ruling coalition retains control; Communists lose ground, **June 11**

Austria threatens to bring its dispute with Italy over the South Tyrol to the United Nations, **July 8**

Premier Aldo Moro's government wins a foreign policy vote of confidence in the Chamber of Deputies, **July 14**

A new 5-year economic plan receives final approval by the Italian Senate, **July 25**

President Giuseppe Saragat ends 2-day visit to the United States; meets with President Johnson, **Sept. 19**

IVORY COAST

Ivory Coast formally establishes diplomatic relations with the Soviet Union, **Jan. 23**

Guinea seizes Ivory Coast fishing vessel, **Feb. 19**

Ivory Coast detains Guinean foreign minister and UN representative, **June 26**

Exchange of hostages between Ivory Coast and Guinea is effected, through UN intervention, **Sept. 21–25**

JAMAICA

Governing Jamaica Labour party wins 33 seats and the People's National party 20 seats in the newly expanded 53-seat House of Representatives, **Feb. 21**

Donald Burns Sangster, acting prime minister for two years, is sworn in as prime minister, **Feb. 22**

Prime Minister Sangster is knighted, **April 7**

Prime Minister Sangster dies in Montreal (Canada); Hugh Shearer, former foreign minister, is sworn in as new prime minister, **April 11**

JAPAN

Premier Eisaku Sato's Liberal Democrats win 277 seats, a majority, in House of Representatives to 140 for Socialist party, **Jan. 29**

Premier Sato formally reelected premier by House of Representatives, **Feb. 17**

Socialist party removes pro-Peking leader Kozo Sasaki and names moderate Seiichi Katsumata as chairman, **Aug. 20**

Premier Sato, meeting in Washington with President Johnson, lauds U. S. efforts to bring "peace and stability" to Asia, **Nov. 14**

Premier Sato and President Johnson agree to immediate talks on early return to Japan of the Bonin Islands in the Pacific, captured in World War II, **Nov. 15**

Premier Sato reshuffles cabinet, retaining seven ministers, in move to strengthen government, **Nov. 25**

JOHNSON, Lyndon B.—See also UNITED STATES

Signs executive order cutting off virtually all trade with Rhodesia, implementing UN resolution, **Jan. 5**

In State of the Union message to 90th Congress, vows to persevere in Vietnam War and asks for surcharge on personal and corporate taxes, **Jan. 10**

Asks Congress to authorize raising Social Security benefits, **Jan. 23**

Submits to Congress $169.2 billion budget, providing $73 billion for defense and moderate increases for Great Society programs, **Jan. 24**

Consigns 2 million tons of grain to India and requests congressional approval for additional allotment, **Feb. 2**

Asks Congress for extensive program of federal assistance to aid state and local crime control, **Feb. 6**

Requests $6.2 billion foreign aid appropriation—the smallest in the 20-year program, **Feb. 9**

Appeals for passage of civil rights legislation defeated in 1966, **Feb. 15**

Meeting with visiting South Korean Premier Chung Il Kwon, pledges increased military aid to Korea, **March 14**

With top officials, holds strategy meeting with South Vietnamese leaders on Guam, **March 20–21**

Directs Central Intelligence Agency (CIA) to end covert financial backing of private organizations, following furor over disclosure of such financing of National Student Association and other groups, **March 29**

Asks for postage increase, and federal pay raise, **April 5**

Participates in Latin American summit meeting at Punta del Este, Uruguay, **April 12–14**

Meets informally with French President de Gaulle and British Prime Minister Wilson in Bonn, West Germany, on occasion of the funeral of former West German Chancellor Konrad Adenauer, **April 25**

Hails agreement on liberalization of trade reached by Kennedy Round negotiators of General Agreement on Tariffs and Trade (GATT) in Geneva on May 15, **May 16**

Visits Expo 67 and meets with Canadian Prime Minister Pearson, **May 25**

Names Solicitor General Thurgood Marshall, a Negro, to the U. S. Supreme Court, **June 13**

Following Israeli-Arab war, asks Arabs and Israel to recognize each other's rights, settle the refugee problem, and set up new and workable borders, **June 19**

Holds summit conference with Soviet Premier Kosygin at Glassboro, N. J., **June 23, 25**

Authorizes use of federal troops in Detroit riots, **July 24**

Announces formation of special Advisory Commission on Civil Disorders to investigate causes of riots and to recommended remedial measures, **July 27**

In budget and tax message, asks Congress for 10% surcharge on income taxes; announces plans to dispatch 45,000 more troops to Vietnam, **Aug. 3**

Authorizes air attacks against new targets in North Vietnam in intensification of air war, **Aug. 8**

Hails as "great gift for future world" Soviet-American agreement on partial draft of nuclear nonproliferation treaty, **Aug. 24**

Signs administration-sponsored veterans bill, extending G. I. benefits to veterans of "Vietnam era," **Aug. 31**

At ceremonies marking completion of ratification of UN-sponsored treaty banning nuclear weapons in space, expresses hope for an end to "competitive-spacemanship," **Oct. 10**

Participates with Mexican President Díaz in ceremonies in Juárez, Mexico, transferring to Mexico 437 acres formerly in Texas, **Oct. 28**

Invites world inspection of all civilian and governmental nuclear facilities except those "with direct national defense significance," **Dec. 2**

Attends funeral services in Australia for Prime Minister Harold Holt, and confers with allied leaders on Vietnam War, **Dec. 21–22**

Pays surprise visit to U. S. troops in Thailand and Camranh Bay, South Vietnam; also has airport conference with Pakistan President Ayub Khan in Karachi, **Dec. 22–23**

Meets with Pope Paul VI in Rome; returns to Washington after 27,000-mile, 5-day journey, **Dec. 23–24**

JORDAN

Government resumes diplomatic relations with West Germany, which were broken off in 1965 following Bonn's recognition of Israel, **Feb. 28**

Prime Minister Wasfi al-Tal resigns; caretaker government is formed by Sharif Hussein ibn Nasser, **March 4**

King Hussein names Saad Jumaa prime minister, **April 23**

Hussein signs defense pact with his former adversary, President Nasser of the UAR, **May 30**

During Israeli-Arab war, Jordanese territory west of the Jordan River falls to Israel, **June 5–7**

Hussein installs new cabinet led by Prime Minister Bahjat al-Talhouni, who advocates cooperation with UAR, **Oct. 7**

KENTUCKY

Louie B. Nunn becomes first Republican to be elected governor since 1943, **Nov. 7**

KENYA

Presidents of Kenya, Tanzania, and Uganda sign treaty establishing an East African Community and an East African Common Market, **June 6**

Charging interference in its internal affairs, Kenya breaks diplomatic relations with Communist China, **June 29**

Kenya and Somalia agree to curb their border war and restore diplomatic ties, **Oct. 28**

KIESINGER, Kurt Georg—See also GERMANY

Confers with President de Gaulle in Paris, **Jan. 13–14**

Meets in Bonn with British Prime Minister Wilson to discuss Britain's application for membership in the Common Market; supports Britain's bid, **Feb. 15–16**

Holds informal talks in Bonn with U. S. President Johnson at funeral of former Chancellor Adenauer, **April 24–26**

Rejects unity talks with East German Premier Willi Stoph; proposes low-level talks on limited cooperation, **June 14**

With Foreign Minister Willy Brandt, visits United States; confers with President Johnson, **Aug. 13–20**

KOREA, South

President Park Chung Hee is elected for his second 4-year term, **May 3**

General elections give the Democratic Republican party an overwhelming majority in the 175-member National Assembly, **June 8**

Students in Seoul and Pusan protest alleged rigging of the June 8 elections, **June 12–19**

KOSYGIN, Aleksei—See also USSR

During state visit to Britain, discusses Vietnam War and other issues with Prime Minister Wilson, **Feb. 6–13**

Addressing UN General Assembly, calls for penalties for Israel and demands that Israel withdraw its troops from conquered Arab territory, **June 19**

Holds confidential summit meetings with President Johnson at Glassboro, N. J., **June 23, 25**

Confers with Premier Castro in Havana, Cuba, **June 26–30**

Reiterates Soviet support for Hanoi's terms for peace talks on Vietnam War, **Oct. 30**

LABOR—See also New York City

Walter P. Reuther, president of the United Automobile Workers (UAW), resigns from the AFL-CIO executive council but retains the presidency of its Industrial Union Department, **Feb. 3**

James R. Hoffa, president of the Teamsters union, enters a federal prison to begin an 8-year sentence on a jury-tampering conviction, **March 7**

The United Rubber Workers strike Firestone, Goodrich, and Uniroyal—the first targets among the big five rubber companies—as contracts expire, **April 21**

Nationwide copper strike begins; walkout called by United Steelworkers, **July 15**

Members of the International Association of Machinists strike 27 railroads; return to work under emergency legislation blocking a shutdown during 90 days of mediation, **July 16–17**

Uniroyal becomes the last of the big five rubber companies to sign a contract with the United Rubber Workers, **July 28**

A presidential board's arbitration award takes effect as a 2-year contract for the nation's railroads and six shopcraft unions, including the Machinists, **Oct. 16**

UAW members accept new contract ending a 49-day strike against Ford Motor Co., **Oct. 25**

Chrysler Corp. and the UAW agree to a 3-year contract, averting a national strike, **Nov. 8**

General Motors Corp. and the UAW agree to a contract matching others in the auto industry, **Dec. 15**

LAOS

Prince Souvanna Phouma is returned to power in the first full-fledged elections since 1960, **Jan. 1**

Prince Souvanna Phouma confers with President Johnson in Washington, **Oct. 21**

LATIN AMERICA

Representatives of 21 Latin American states, meeting in Mexico, negotiate a treaty banning nuclear weapons from the region, **Feb. 12**

Third special inter-American conference of the Organization of American States (OAS), meeting in Buenos Aires, revises OAS charter to make the objectives of the Alliance for Progress the policy of the inter-American system, **Feb. 15–22**

OAS heads of state confer at Punta del Este, Uruguay; sign agreement to form Latin American common market by 1985, **April 12–14**

Communist revolutionary Organization of Latin American Solidarity holds its first conferences in Havana, Cuba; adopts manifesto supporting revolutions and condemning U. S. "imperialism," "reactionary" Latin American governments, and socialist states trading with these regimes, **July 31–Aug. 10**

OAS foreign ministers, meeting in Washington, adopt new anti-Cuban policies and agree on steps to fight subversion within the hemisphere, **Sept. 22–24**

Bolivian army officially confirms the capture (Oct. 8) and subsequent death of Cuban insurrectionist Ernesto (Che) Guevera, **Oct. 10**

LEBANON

Lebanon and Kuwait announce their intention of remaining neutral in inter-Arab disputes, **Feb. 14**

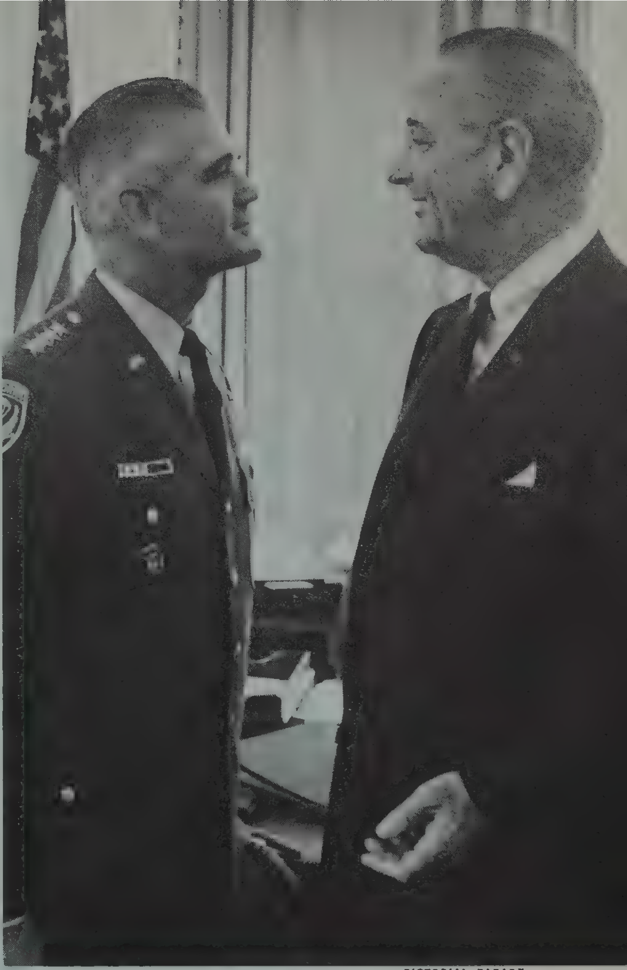
A national emergency is declared as Israeli-Arab conflict breaks out, **June 5**

British and U. S. ambassadors are asked to leave, **June 6**

LESOTHO

King Motlotlehi Moshoeshoe II agrees to observe constitutional limitations on his powers, **Jan. 5**

Seventh-largest known diamond is found on a small claim in northeastern Lesotho, **May 26**



PICTORIAL PARADE

JOHNSON: The commander in chief visits with Gen. William Westmoreland, head of U. S. forces in Vietnam.

LIBYA

Premier Hussein Mazik announces that Libya has asked the United States and Britain to liquidate their air bases, **June 15**

Mazik resigns, and King Idris names Abdel-Kader el-Badry as his successor, **July 1**

Abdel-Hamid Bakkush succeeds to the premiership after the resignation (Oct. 25) of el-Badry, **Oct. 27**

LUCE, Henry

U. S. publisher, founder of Time-Life-Fortune magazine complex, dies in Phoenix, Ariz., at age 68, **Feb. 28**

MALAYSIA

Britain announces plans to withdraw its forces from Malaysia and Singapore by 1975, **July 18**

Government formally establishes diplomatic relations with Indonesia, **Aug. 31**

MARYLAND

Republican Spiro T. Agnew is inaugurated as governor; pledges to discard "old alliances and outmoded conventions" in government, **Jan. 25**

Maryland's first constitutional convention in more than a century convenes in Annapolis, **Sept. 12**

MASSACHUSETTS

John A. Volpe, Republican, takes oath as first Massachusetts governor elected for a 4-year term, **Jan. 5**

Three masked gunmen steal more than $600,000 from a Brink's armored truck at Brockton, **May 23**

Cambridge voters reject a proposal urging "prompt return home of American soldiers from Vietnam;" Kevin White is elected mayor of Boston, **Nov. 7**

MEXICO

Fourteen of 21 negotiating nations sign a treaty declaring Latin America a nuclear-free zone, in Mexico City, **Feb. 14**

Ruling Institutional Revolutionary party (PRI) wins 7 contested governorships and 178 contested seats in the national Chamber of Deputies, **July 2**

PICTORIAL PARADE

MIDDLE EAST: UAR President Nasser (*left*) and Field Marshal Amer are shown at news conference following Israel's victory in the June war. Amer was arrested in August after an army plot against Nasser, and then (according to the official version) killed himself.

President Gustavo Díaz Ordaz confers in Washington, D. C., with President Johnson on the Alliance for Progress and other economic efforts, **Oct. 27**

Díaz and Johnson participate in formal restoration to Mexico of the El Chamizal area near El Paso, Tex., **Oct. 28**

MIDDLE EAST—See also ISRAEL; JORDAN; SYRIA; UNITED ARAB REPUBLIC; UNITED NATIONS

In a 6-day war, Israel gains sweeping victory over the Arab states, occupying almost all of Egypt's Sinai Peninsula and Gaza Strip, Jordanian territory west of the Jordan River (including Old Jerusalem), and the heights of southwestern Syria; UN Security Council adopts three cease-fire resolutions, **June 5–10**

At Khartoum (Sudan) summit meeting, Arab states agree to assist the UAR and Jordan to recover from the Israeli-Arab war with a $392 million fund; resolve to seek a nonmilitary solution of the impasse with Israel, **Aug. 29–Sept. 1**

UN Security Council unanimously adopts a British resolution establishing a framework for peace in the Middle East, **Nov. 22**

Britain grants independence to Aden and South Arabia, which unite as the People's Republic of South Yemen, **Nov. 30**

MISSISSIPPI

Seven of 18 men accused in the 1964 slaying of three civil rights workers are convicted by all-white jury, **Oct. 20**

John Bell Williams, Democratic congressman, is elected governor of Mississippi, **Nov. 7**

Robert G. Clark becomes the first Negro to win election to the state legislature in the 20th century, **Nov. 7**

MORGENTHAU, Henry, Jr.

Former U. S. treasury secretary (1934–45) dies in Poughkeepsie, N. Y., at age 75, **Feb. 6**

NETHERLANDS

Princess Margriet Francisca, second in line to the throne, marries a commoner, **Jan. 10**

No party wins a majority in national elections, **Feb. 15**

Petrus J. S. de Jong, of the Catholic People's party, becomes premier of new coalition government, **April 4**

Crown Princess Beatrix gives birth to a son, the first male in line of succession to the throne of the Netherlands since 1884, **April 27**

NEW HAMPSHIRE

State supreme court rules unconstitutional a law passed by 1967 state legislature allowing distribution of sweepstakes funds to parochial schools, **Oct. 6**

NEW JERSEY

President Johnson and Soviet Premier Kosygin hold summit conferences at Glassboro, **June 23, 25**

Six days of rioting in Negro section of Newark result in 26 deaths and devastation of 10 square miles; National Guard restores order, **July 12–17**

Republicans capture state legislature, winning 3-to-1 majorities in both houses, **Nov. 7**

NEW ORLEANS

Clay L. Shaw, retired businessman, is indicted by New Orleans grand jury on charge of conspiring with others to assassinate the late president, **March 22**

NEW YORK

Governor Rockefeller signs state lottery bill into law, **April 18**

Voters reject controversial new state constitution by a margin of nearly 3 to 1, **Nov. 7**

U. S. Supreme Court affirms lower court ruling requiring congressional redistricting in state before the 1968 elections, **Dec. 18**

NEW YORK CITY

World Journal Tribune goes out of business after 8 months of publication, **May 5**

Two die in three days of violence in the Puerto Rican section of East Harlem, **July 23–25**

U. S. Public Health Service reports that New York has most severe air polution problem in nation, **Aug. 3**

Fourteen-day teachers' strike ends, **Sept. 28**

James L. Marcus, resigned commissioner of water supply, gas, and electricity, is indicted by a federal grand jury on charges that he accepted a kickback on a city contract, **Dec. 18**

NEW ZEALAND

Premier Ky of South Vietnam visits New Zealand to encourage continued support for his regime, **Jan. 23–25**

Economic austerity measures are imposed, **Feb. 10; May 4**

New decimal currency goes into effect, **July 10**

Treaty controlling fishing rights of Japan in New Zealand waters is signed, **July 12**

Referendum is held on drinking laws and on term of Parliament, **Sept. 23**

Government announces that more troops will be sent to Vietnam, **Oct. 16**

NICARAGUA

Antigovernment rioting in Managua erupts against presidential candidate Anastasio Somoza Debayle, Jr.; over 30 persons are killed, **Jan. 22**

Somoza is elected president by substantial majority, **Feb. 5**

Somoza is sworn in as president in Managua, **May 1**

NIGERIA

Following meeting in Aburi, Ghana, with the four regional governors, Chief of State Lt. Col. Yakubu Gowon announces that the breakup of Nigeria threatened by demands of the Eastern Region for autonomy has been averted, **Jan. 6**

Federal government restores considerable regional autonomy—as agreed upon at Aburi—following ultimatum on secession by Lt. Col. Odumegwu Ojukwu, military governor of the Eastern Region, but retains right to resume control during a state of emergency, **March 17**

Gowon announces reorganization of Nigeria into 12 regions, **May 27**

East declares itself the independent republic of Biafra; federal government orders mobilization, **May 30**

Gowon is promoted to major general, **June 2**

Fighting erupts between federal and Biafran troops, **July 6**

Biafran forces take Mid-Western Region, **Aug. 9**

Organization of African Unity (OAU) appoints a 6-nation commission to mediate the Nigerian civil war, **Sept. 14**

Federal troops recapture Mid-West, **Sept. 20**

Biafran capital of Enugu falls to federal troops, **Oct. 4**

OAU mission visits Nigeria, **Nov. 22–24**

NOBEL PRIZES

Nobel Prizes for 1967 are presented in Stockholm to Miguel Angel Asturias (literature); Ragnar Granit, Haldan Hartline, and George Wald (medicine); Ronald Norrish, Manfred Eigen, and George Porter (chemistry); and Hans Bethe (physics), **Dec. 10.**

NORTH ATLANTIC TREATY ORGANIZATION

NATO's Supreme Allied Command leaves headquarters in France; new headquarters are established at Casteau, near Mons, Belgium, **Mar. 31–April 1**

Secretary of Defense Robert S. McNamara explains U. S. decision to establish anti-ballistic missile ring around U. S. at meeting of defense chiefs at Ankara, Turkey; 7-nation Nuclear Planning Group asks for plan on deploying of atom mines, **Sept. 28–29**

14-nation Defense Planning Commission meeting in Brussels votes to establish multinational fleet of destroyers for duty in the Atlantic in all emergencies, **Dec. 11**

OHIO

National Guard succeeds in quelling Cincinnati racial violence that began June 13, **June 15**

Toledo suffers racial strife for 3d time in a week, **July 27**

OPPENHEIMER, J. Robert

U. S. nuclear physicist, director of first atom bomb project, dies in Princeton, N. J., at age 62, **Feb. 18**

PAKISTAN

Unarmed plane is shot down by Indian Air Force, **Feb. 2**

After objecting to the U. S. announcement on April 12 stopping the sale of new arms to Pakistan and India, Pakistan boycotts semiannual meeting of the military advisers of SEATO, **April 14**

Fatima Jinnah, sister of the founder of Pakistan, Mohammed Ali Jinnah, and an opposition leader, dies, **July 8**

PANAMA

Panamanian President Robles and U. S. President Johnson announce that the two countries have reached agreement (subject to ratification) on new treaties governing the Panama Canal and Canal Zone, **June 26**

PAUL VI, Pope—See Religion

PEARSON, Lester B.—See also Canada

Canadian prime minister announces plans to retire as soon as Liberal party elects a successor, **Dec. 14**

PENNSYLVANIA

Raymond Shafer, Republican, is inaugurated as governor, **Jan. 17**

Convention for revising of the state's nearly century-old constitution opens, **Dec. 1**

PHILADELPHIA

Transport Workers Union accepts new contract, ending 1-day transit strike, **Jan. 16**

Mayor James H. J. Tate (Democrat) is reelected, **Nov. 7**

PHILIPPINES

President Ferdinand E. Marcos confers with Arthur J. Goldberg, U. S. ambassador to United Nations, in Manila, **Mar. 4**

President Marcos visits 2,000-man Philippine force in South Vietnam, **July 16**

Association of Southeast Asian Nations (ASEAN) is created in Bangkok to promote mutual assistance between Malaysia, the Philippines, Singapore, and Thailand, **Aug. 8**

President Marcos' Nationalist party registers substantial gains in elections for senators, and provincial, city, and town officials, **Nov. 14**

POLAND

Warsaw Pact nations, meeting in Warsaw, reach no decision on whether to establish diplomatic relations with West Germany, **Feb. 8–10**

Edward Ochab, Polish head of state, arrives in Rome for 3-day state visit, **April 6**

Communist party's Central Committee warns against contact with the West and emphasizes the strengthening of Communist ideology in Poland, **May 20**

Government warns Polish Jews that their allegiance must be to Poland in the Israeli-Arab conflict, **June 19**

French President de Gaulle pays state visit, **Sept. 6–12**

Party chairman Władysław Gomułka tells de Gaulle that Poland's chief allegiance is to the Soviet Union, **Sept. 11**

PORTUGAL

Portuguese governor of Macao signs an agreement with pro-Communist Chinese faction, **Jan. 29**

Royalists are permitted to demonstrate in Lisbon, **April 5**

Pope Paul makes a pilgrimage to Fátima, **May 13**

UN Security Council censures Portugal for allowing Angola to be used as a base by mercenaries fighting against the Congo (Kinshasa), **Nov. 15**

PUERTO RICO

Over 60% of the voters choose to retain commonwealth association with the United States in plebiscite, **July 23**

RELIGION

Pope Paul VI confers at Vatican with Soviet President Nikolai Podgorny, **Jan. 30**

Pope Paul issues encyclical *Populorum progressio* calling for social justice and economic development of the poor, **Mar. 28**

Tennessee's "monkey law," prohibiting the teaching of any theory that denies the Biblical idea of divine creation of man, is repealed, **May 18**

General Assembly of the United Presbyterian Church votes to adopt the Confession of 1967, which applies Christian principles to current social problems; action represents first major change in doctrine since the church was established in 1705, **May 22**

Pope Paul names 27 new cardinals, including four from the United States, **May 29**

Tens of thousands of Jews pray, celebrating Shabuoth, at Jerusalem's Wailing Wall, one week after capture of Old City by the Israelis; celebrants include pilgrims from North Africa and other Arabic and European communities, **June 14**

Report Israel has entered into discussion with representatives of the Vatican, Muslim leaders in Israel, and World Council of Churches on guaranteeing access to shrines in Jerusalem, **June 22**

Spain's new statute liberalizing religious laws is promulgated; statute still limits rights of non-Catholics and is highly unsatisfactory to Protestant groups, which are permitted to register only as "civil associations," **June 26**

Eastern Orthodox Patriarch Athenagoras and Pope Paul exchange vows of ecumenical unity in historic meeting in Istanbul, Turkey, **July 25–26**

Central Committee of World Council of Churches meets in Crete, in anticipation of Fourth Assembly of Council in 1968, **Aug. 15–25**

Pope Paul announces sweeping reforms in Roman Curia; 12 departments are reorganized and 3 eliminated, **Aug. 18**

First Synod of Bishops opens in Rome, attended by 193 cardinals and lesser prelates, **Sept. 29**

Protestants commemorate 450th anniversary of Lutheran Reformation; ceremony in Wittenberg, East Germany, held on site where Martin Luther nailed his 95 theses to church door in 1517, **Oct. 31**

Francis Cardinal Spellman, spiritual leader of 2 million Roman Catholics in New York archdiocese, dies, **Dec. 2**

RUMANIA

Rumania establishes full diplomatic relations with West Germany, **Jan. 31**

Premier Ion Gheorghe Maurer becomes the first Communist head of state to be received at the White House, **June 27**

Foreign Minister Corneliu Mănescu becomes the first representative of a Communist nation to be elected president of the UN General Assembly, **Sept. 19**

Nicolae Ceaușescu is chosen to replace Chivu Stoica as President of the State Council at Rumanian Communist party meeting in Bucharest, **Dec. 7**

RUSK, Dean

U. S. secretary of state reports that enemy in Vietnam is "hurting very badly" but cautions against any premature talk of settlement, **July 19**

Concedes that Communist China might enter the war, **Sept. 8**

In reply to Congressional critics, declares that U. S. security is at stake in Vietnam, **Oct. 12**

SANDBURG, Carl

U. S. poet and biographer of Lincoln dies in Flat Rock, N. C., at age 89, **July 22**

SAN FRANCISCO

Voters reject proposal for immediate cease-fire and withdrawal of U. S. forces from Vietnam, **Nov. 7**

Joseph L. Alioto is elected mayor, **Nov. 7**

SIERRA LEONE

Siaka P. Stevens is sworn in as prime minister, replacing Sir Albert Margai, but is immediately arrested by army Commander in Chief David Lansana, **March 21**

Junior army officers stage bloodless coup; Lansana is arrested and former prime ministers Stevens and Margai are placed under "protective custody;" Lt. Col. Ambrose P. Genda is named chairman of an 8-man National Reformation Council, **March 23**

Genda is dropped as junta chairman and replaced by Lt. Col. Andrew Juxon-Smith, **March 27**

SOMALIA

National Assembly elects Abdirashid Ali Shermarke president for 6-year term, **June 10**

President Shermarke appoints Mohammed Haji Ibrahim Egal prime minister, **July 6**

Somalia and Kenya agree to curb border war and restore diplomatic relations, **Oct. 28**

SOUTH AFRICA

U. S. Defense Department cancels shore leave in Cape Town for crew of the carrier *Franklin D. Roosevelt* because of South African apartheid laws, **Feb. 4**

Theophilus E. Donges is elected president to succeed Charles Swart, **Feb. 28**

Prime Minister Balthazar J. Vorster announces plans to grant internal self-government to Ovamboland territory in South West Africa, **March 21**

UN General Assembly votes to establish an 11-member council to administer South West Africa, **May 19**

Jozua F. Naude is sworn in as acting president after Donges falls ill, **May 31**

Former Chief Albert Luthuli, winner of the Nobel Peace Prize for 1960, dies, **July 21**

Louis Washkansky, who survived 18 days after receiving the world's first human heart transplant in Cape Town, dies of pneumonia, **Dec. 21**

SOUTH YEMEN, People's Republic of—See COMMONWEALTH OF NATIONS

SPACE EXPLORATION

Communications Satellite Corporation launches Pacific 1, second Intelsat, satellite, as link between North America and Far East, **Jan. 11**

U. S. Environmental Science Services Administration orbits ESSA 4 weather satellite, first of three 1967 launches in this series, **Jan. 26**

Astronauts Virgil I. Grissom, Edward H. White II, and Roger B. Chaffee are killed in flash fire on launch pad at Cape Kennedy, Fla., while testing Apollo craft, **Jan. 27**

U. S. Lunar Orbiter 3 achieves successful orbit around moon and begins 14-day photographic mission to study 12 possible sites for future manned landing, **Feb. 8**

Intelsat 2 F-3 is launched to provide commercial communications link over Atlantic Ocean, **March 22**

Report of U. S. board of review investigating Apollo tragedy blames fire on faulty wiring; criticizes National Aeronautics and Space Administration and manufacturer of spacecraft for inadequate safety precautions, **April 9**

U. S. Surveyor 3 moon probe, equipped with claw for digging, bounces three times before it soft-lands near Ocean of Storms and begins to transmit photographs, **April 19**

Soviet cosmonaut Vladimir M. Komarov becomes first known casualty of actual space mission, when his Soyuz 1 vehicle tangles in its parachute lines while descending from 1-day flight and plunges 4.3 miles, **April 24**

Italy sends San Marco 2 into near-equatorial orbit and becomes fourth nation to launch an earth satellite, **April 26**

Lunar Orbiter 4 enters orbit of moon to continue mapping mission of U. S. series of probes, **May 8**

Molniya 1 E, first of three Soviet communications satellites launched in 1967, is placed in orbit, **May 24**

Lunar Orbiter 5 begins final mission of U. S. series, in which it also photographs the earth from the moon, **Aug. 5**

U. S. Biosatellite 2 research laboratory, carrying biological specimens to study effects of weightlessness and radiation, returns from 2-day orbital mission, **Sept. 9**

U. S. Surveyor 5, equipped to make a simple chemical analysis of the lunar surface material, soft-lands on moon at edge of Sea of Tranquillity, **Sept. 10**

USSR parachutes instrumented capsule from Venus 4 spacecraft to surface of Venus; data show atmospheric conditions inhospitable to life, **Oct. 18**

U. S. Mariner 5 space probe passes behind Venus at distance of 2,480 miles and sends back data, **Oct. 19**

Two unmanned Soviet satellites, Cosmos 186 and 188, are docked by command from earth while in orbit and fly together 3½ hours before separating, **Oct. 30**

U. S. Surveyor 6 lands safely at center of visible face of the moon and begins returning pictures and data, **Nov. 9**

U. S. Saturn 5 rocket blasts unmanned Apollo craft into orbit in flawless flight of 8½ hours, **Nov. 9**

Australia becomes fifth nation to launch a satellite, orbiting WRESAT 1 weather satellite, **Nov. 28**

U. S. Test and Training Satellite 1 is launched (with Pioneer 8 solar orbiter) to serve as a checkpoint for Manned Space Flight Network, **Dec. 13**

SPAIN

Police battle 5,000 rioting workers in Bilbao, **April 4**

Demonstrations are staged against the Franco regime in 13 Spanish cities, giving rise to the worst outbreak of violence since the Spanish Civil War, **May 1**

Voters in Gibraltar reject Spanish rule in a British-sponsored referendum condemned by a UN committee, **Sept. 10**

Spaniards vote in the first direct election under the 1966 constitution for members of the Cortes; some opposition to the Franco regime is registered, **Oct. 10**

Spain, following the lead of Britain, devalues its currency (the peseta) by 14.3%, **Nov. 20**

Spanish supreme court rules all strikes illegal, **Dec. 12**

SPELLMAN, Francis Cardinal

Cardinal of Roman Catholic Church and leader of New York archdiocese dies in New York at age 78, **Dec. 2**

SPORTS

Purdue University defeats University of Southern California, 14–13, in Rose Bowl game, **Jan. 2**

Green Bay Packers defeat Kansas City Chiefs, 35–10, in first Super Bowl (for professional football championship) at Los Angeles, **Jan. 15**

UCLA, led by Lew Alcindor, routs Dayton, 79–64, at Louisville, Ky., for the NCAA basketball title, **March 25**

Gay Brewer posts 280 to finish first in Masters golf championship at Augusta, Ga., **April 9**

Philadelphia 76ers win National Basketball Association championship, defeating San Francisco Warriors, 4 games to 2, **April 24**

Cassius Clay, undefeated heavyweight boxer, is divested of his title for refusing induction into the U. S. Army, **April 28**

Toronto Maple Leafs win Stanley Cup hockey title, defeating Montreal Canadians, 4 games to 2, **May 2**

Proud Clarion, Bob Ussery up, wins Kentucky Derby by a length at Louisville, **May 6**

A.J. Foyt of Houston takes Indianapolis 500 auto race, **May 31**

Jack Nicklaus wins U. S. Open golf championship at Baltusrol Country Club, Springfield, N. J., **June 18**

Jim Ryun of University of Kansas betters his own world record for the mile (3:51.1) at Bakersfield, Calif., **June 23**

Billie Jean King defeats Ann Haydon Jones of Britain, 6–3, 6–4, to retain Wimbledon tennis crown, **July 8**

Debbie Meyer, 15-year-old swimmer, sets a world mark of 17:50.2 for the 1,500-meter freestyle in national AAU meet at Philadelphia, **Aug. 20**

U. S. yacht *Intrepid* defeats Australian *Dame Pattie* in four straight races for America's Cup, **Sept. 12–18**

St. Louis Cardinals win baseball's World Series by beating Boston Red Sox in 7th and deciding game, **Oct. 12**

Green Bay Packers defeat Dallas Cowboys, 21–17, to retain the National Football League title, **Dec. 31**

SUDAN

Summit meeting of Arab leaders is held at Khartoum; financial aid for war-damaged UAR and Jordan is approved, **Aug. 29–Sept. 1**

SUPREME COURT, U. S.

Supports freedom of the press, ruling that damages cannot be collected for invasion of privacy by articles giving false reports, unless these are deliberate or reckless, **Jan. 9**

Declares unconstitutional New York state loyalty law barring appointment or retention of teachers unless they sign certificates that they are not members of the Communist party, **Jan. 23**

Orders that children accused of crime be given the same rights as adults, including the right to have a lawyer and to be warned against self-incrimination, **May 15**

Holds unconstitutional an amendment to the California state constitution allowing property owners to discriminate in resale or rental of housing, **May 29**

Declares unconstitutional the Virginia statute forbidding marriage between whites and nonwhites, **June 12**

Thurgood Marshall is named by President Johnson to succeed retiring Associate Justice Tom C. Clark; Marshall is the first Negro to serve on the court, **June 13**

SWEDEN

Major political parties agree to support wide-ranging constitutional reforms, **March 17**

Sweden applies for associate membership in the European Economic Community, **July 28**

A switch from left-hand to right-hand driving is made on Sweden's roads after four years of preparation, **Sept. 3**

SYRIA

Syrian and Israeli jets engage in air clashes, **April 7**

Jordan orders Syrian ambassador to leave; common border is closed, **May 23**

During Israeli-Arab war, Syria joins with Jordan and the United Arab Republic; loses Golan highlands to Israeli occupation before cease-fire, **June 5–10**

Syria denounces and boycotts Arab summit conference in Khartoum, Sudan, **Aug. 29–Sept. 1**

President el-Atassi denounces UN Security Council resolution on the Middle East, **Nov. 23**

TANZANIA

President Julius K. Nyerere issues the Arusha Declaration, a blueprint for Tanzanian socialism, and proceeds to nationalize numerous private industries, **February 5**

THANT, U—See UNITED NATIONS

TOGO

Army Chief of Staff Col. Étienne Eyadema deposes President Nicolas Grunitzky in a bloodless coup, **Jan. 13**

Eyadema assumes presidency, promising army withdrawal when situation returns to "normal," **April 14**

TRACY, Spencer

U. S. stage and screen actor dies in Beverly Hills, Calif., at age 67, **June 10**

TURKEY—See also CYPRUS

Premier Süleyman Demirel reshuffles his 22-man cabinet after 9 ministers resign, **April 1**

President Cevdet Sunay begins a 9-day visit to the United States, **April 3**

Three severe earthquakes kill some 200 persons and injure many more, **July 22–30**

Turkey and Greece work out accord in crisis that threatened to bring them to war over Cyprus, **Dec. 1–3**

UGANDA

Nation officially becomes a republic under new constitution, which confers broad powers on the presidency, **Sept. 8**

UNION OF SOVIET SOCIALIST REPUBLICS—See also KOSYGIN

President Nikolai V. Podgorny confers with Pope Paul while on an official visit to Italy, **Jan. 30**

Dependents of Soviet embassy personnel in Peking are ordered home after instances of harassment, **Feb. 4**

Premier Aleksei N. Kosygin pays state visit to Britain; arranges Anglo-Soviet "hot line," **Feb. 6–13**

Svetlana Alliluyeva, daughter of late dictator Joseph Stalin, arrives in the United States after having defected to the West (March 6) while on a visit to India, **April 21**

Cosmonaut Vladimir M. Komarov is killed when his spacecraft crashes on reentry, **April 24**

Government ratifies pact with the United States and other nations to ban nuclear weapons in space, **May 19**

USSR breaks diplomatic relations with Israel, **June 10**

Kosygin denounces Israel at Soviet-sponsored emergency session of the UN General Assembly on Middle East, **June 19**

Kosygin and U. S. President Johnson hold summit conference at Glassboro, N. J., **June 23, 25**

Aleksandr N. Shelepin, a member of the ruling Politburo, who once was regarded as a potential head of the Soviet Communist party, is transferred (demoted) from his post as secretary of the party's Central Committee, **July 11**

United States and USSR submit partial draft treaty, banning the spread of nuclear weapons, to the UN Disarmament Committee in Geneva, **Aug. 24**

USSR concludes agreements with North Vietnam providing for continuing military and economic aid, **Sept. 23**

Instrument capsule from Soviet spacecraft Venus 4 lands on planet Venus; data show atmospheric conditions inhospitable to life, **Oct. 18**

Two unmanned Soviet spaceships dock in orbit, **Oct. 30**

U. S. Secretary of Defense Robert S. McNamara reports that USSR is developing an orbital missile, **Nov. 3**

Andrei A. Grechko is named minister of defense, succeeding Rodion Y. Malinovsky, who died March 31, **April 12**

Celebration of the 50th anniversary of the Bolshevik Revolution begins in Moscow, **Nov. 4**

United States and USSR reach agreement to limit Soviet fishing off the U. S. Middle Atlantic coast, **Nov. 25**

UNITED ARAB REPUBLIC

President Nasser demands that UN peace-keeping forces be withdrawn from the Gaza Strip and the Sinai Peninsula; UN Secretary-General U Thant acquiesces, **May 18**

UAR closes Gulf of Aqaba to Israeli shipping, **May 22**

Nasser signs defense pact with King Hussein of Jordan, his former adversary, **May 30**

During the 6-day Israeli-Arab war the UAR suffers heavy losses and defeat, losing the Gaza Strip and the Sinai Peninsula to Israeli occupation; the Suez Canal is closed, **June 5–10**

The UAR severs diplomatic ties with the United States, **June 6**

Nasser resigns the presidency but, bowing to "people's will," decides to remain in office, **June 9–10**

Nasser names himself premier and assumes the leadership of Egypt's sole political party, the Arab Socialist Union, **June 19**

UAR forces are reported evacuating Yemen, **Sept. 10**

UAR missiles sink Israeli destroyer *Elath*, **Oct. 21**

Israel destroys UAR oil refineries at Suez city, **Oct. 24**

UNITED NATIONS

Secretary-General U Thant orders withdrawal of UN peace-keeping forces from the United Arab Republic–Israel border at UAR President Nasser's demand, **May 18**

General Assembly special session votes to establish a UN council and a UN commissioner to administer the territory of South West Africa, **May 19**

NASA FROM UPI

SPACE EXPLORATION: Saturn 5 "moon rocket" moves on a giant transporter to the launch pad at Cape Kennedy. It sent an unmanned Apollo spacecraft into orbit on Nov. 9.

Security Council adopts 3 cease-fire resolutions in the Israeli-Arab war and a 4th resolution condemning violations of the cease-fire, **June 6, 7, 9, 11**

General Assembly convenes an emergency session on the Middle East, called by the USSR; passes resolution (ignored by Israel) annulling the change in status of the city of Jerusalem, but leaves major business to the Security Council, **June 17–Sept. 18**

Security Council authorizes the stationing of UN observers on both sides of the Suex Canal to insure maintenance of the cease-fire, **July 9**

U. S. and USSR present identical but incomplete drafts of a nuclear nonproliferation treaty to the 18-nation UN Disarmament Committee at Geneva, **Aug. 24**

Corneliu Mănescu, Rumania's foreign minister, is elected president of the 22d session of the General Assembly at its opening, **Sept 19**

PARIS MATCH, FROM PICTORIAL PARADE

USSR: Soviet troops pass in review through Moscow's Red Square during May Day celebration. The year 1967 marked the 50th anniversary of the Bolshevik Revolution.

Security Council censures Portugal for permitting Angola to be used by mercenaries as a base of operations against the Congo (Kinshasa), **Nov. 15**

Security Council unanimously adopts British resolution establishing a framework for peace between Israel and the Arab states, **Nov. 22**

Security Council asks Cyprus, Greece, and Turkey to show restraint in dispute over Cyprus, **Nov. 25**

General Assembly rejects draft resolution to admit Communist China and expel Nationalist China; vote is 45 to 58, with 17 abstentions, **Nov. 28**

U Thant receives favorable replies from an appeal to the governments of Cyprus, Greece, and Turkey (Dec. 3) and a Greek-Turkish accord over Cyprus is reported, **Dec. 4**

People's Republic of South Yemen is admitted as the 123d member of the UN, **Dec. 14**

UNITED STATES—For domestic events, see also such headings as ATOMIC ENERGY; CIVIL RIGHTS; JOHNSON; LABOR; SPACE EXPLORATION; SUPREME COURT; and individual states and cities. For foreign affairs, see also such headings as JOHNSON; RUSK; VIETNAM WAR; and other countries.

DOMESTIC EVENTS

90th Congress convenes with 64 Democrats and 36 Republicans in the Senate and 248 Democrats, 187 Republicans, and 1 vacancy in the House; President Johnson in State of the Union message asks for a surcharge on personal and corporate taxes, **Jan. 10**

Lt. Col. Virgil I. Grissom, Lt. Col. Edward H. White II, and Lt. Comdr. Roger B. Chaffee, astronaut crew for planned Apollo 1 mission, are killed in a flash fire in their spacecraft during test on launch pad at Cape Kennedy, Fla., **Jan. 27**

25th Amendment to U. S. Constitution, redefining lines of presidential succession, is ratified, **Feb. 10**

President Johnson directs the Central Intelligence Agency (CIA) to end covert financial backing of private organizations following furor over disclosure of secret CIA financing of National Student Association and other groups, **March 29**

Former Senate aide Robert G. Baker, convicted on Jan. 29 of income tax evasion, theft, fraud, and conspiracy, is sentenced to 1 to 3 years in prison, **April 7**

New York (Harlem) Congressman Adam Clayton Powell is reelected to House in special election; Powell was previously denied his seat by a House vote of 307 to 116 on March 1; charges against him included misappropriation of funds and defying the courts, **April 11**

Spacecraft Surveyor 3, launched April 17, makes soft landing on moon and sends photos; its mechanical scoop digs up soil-like moon surface, **April 19**

Supreme Court upsets Virginia law against interracial marriage, **June 12**

Cassius Clay, who was stripped of his world heavyweight boxing title on April 28 because of his refusal to be drafted, is convicted of violating the selective service law and sentenced to 5 years in prison, **June 20**

Senate votes 92–5 to censure Sen. Thomas J. Dodd (Connecticut Democrat) for using political campaign funds "for his personal benefit," **June 23**

Six days of rioting in a predominantly Negro section of Newark, N. J., result in death toll of 26, property damage estimated at $15–30 million, and devastation of a 10-square-mile area, **July 12–17**

Eight days of rioting in Detroit result in death toll of 43 and damage estimated above $150 million; at the request of Michigan Gov. George W. Romney, President Johnson authorizes (July 24) sending of federal troops to aid National Guard and police, **July 23–30**

President Johnson appoints 11-member Advisory Commission on Civil Disorders to investigate and report on causes of urban violence and to recommend remedial measures, **July 27**

George Lincoln Rockwell, founder of the American Nazi party, is shot to death in Arlington, Va., **Aug. 25**

Secretary of Defense Robert S. McNamara announces plans to deploy limited missile defense system against possibility of attack by Communist China, **Sept. 18**

Spacecraft Mariner 5 passes Venus and collects data on planet's atmosphere, **Oct. 19**

Federal marshals and soldiers repulse thousands of demonstrators storming the Pentagon after an anti-Vietnam War rally that brought estimated 50,000 protesters to Washington, **Oct. 21**

In off-year elections, two Negro Democrats are elected mayors of large cities: Carl B. Stokes in Cleveland and Richard G. Hatcher in Gary, Ind., **Nov. 7**

Saturn 5 rocket blasts unmanned Apollo spacecraft into successful orbit and splashdown—a major step to a manned moon landing; Saturn 5 is the heaviest object man has propelled into space, **Nov. 9**

U. S. population officially reaches 200 million at 11:03 A.M., **Nov. 20**

President Johnson nominates Defense Secretary McNamara to head the World Bank, **Nov. 27**

Lynda Bird Johnson, daughter of President Johnson, is married to Marine Capt. Charles S. Robb in the White House, **Dec. 9**

FOREIGN AFFAIRS

President Johnson holds strategy meeting with South Vietnamese leaders in Guam; communiqué states that talks demonstrated determination of the allies to "defend freedom" in South Vietnam while searching for an "honorable peace," **March 20–21**

North Vietnamese press agency reveals, and U. S. State Department confirms, secret exchange of letters between President Johnson (Feb. 2) and President Ho Chi Minh (March 10); Johnson suggested direct negotiations, with reciprocal military de-escalation, but Ho rebuffed offer and demanded unconditional cessation of U. S. bombing, **March 21**

First U. S.-USSR consular treaty since Russian Revolution is signed by President Johnson, **March 31**

Svetlana Alliluyeva, daughter of former Soviet dictator, Joseph Stalin, takes up residence in the United States following defection from the USSR on March 6, **April 21**

United States ratifies 1966 UN-sponsored treaty banning nuclear weapons in space (signed Jan. 27, 1967), **April 25**

President Johnson and Soviet Premier Kosygin communicate via "hot line" to avoid misunderstandings during Middle East crisis, **June 5, 8**

Defense Department reports that 34 men were killed on communications ship *Liberty,* when it was mistakenly attacked by Israel in Mediterranean on June 8 during Israeli-Arab war, **June 14**

President Johnson and Soviet Premier Kosygin meet for the first time and hold "useful" talks on a wide range of issues at Glassboro, N. J., **June 23, 25**

U.S. and Panamanian negotiators reach agreement on treaties providing that the United States yield sovereignty in Panama Canal Zone and that both countries participate in operating canal, **June 26**

President Johnson authorizes air attacks on targets in North Vietnam previously off limits, including Hanoi-Haiphong area, **Aug. 8**

U. S. and USSR jointly present to Geneva Disarmament Committee a partial draft treaty outlawing spread of nuclear weapons, **Aug. 24**

President Johnson and Mexican President Díaz participate in ceremonies in Juárez, Mexico, transferring to Mexico 437 acres formerly in Texas, **Oct. 28**

Presidential envoy Cyrus R. Vance ends 10-day mission to Greece and Turkey after securing agreement averting war over Cyprus, **Dec. 3**

APPOINTMENTS

President Johnson names Ramsey Clark to succeed Nicholas deB. Katzenbach as attorney general, **Feb. 28**

Ellsworth Bunker is appointed ambassador to South Vietnam, succeeding Henry Cabot Lodge, **March 15**

Johnson nominates as secretary of commerce Alexander B. Trowbridge, who had been acting secretary since John T. Connor resigned on Jan. 18, **May 22**

John Charles Daly is named director of the Voice of America, succeeding John Chancellor, **May 29**

Johnson names Solicitor General Thurgood Marshall to the Supreme Court, replacing Tom C. Clark, who announced his retirement June 12 to avoid possible conflict of interest following nomination of his son Ramsey Clark as U. S. attorney general; Marshall is the first Negro appointed to the court, **June 13**

Paul R. Ignatius is named secretary of the Navy, replacing Paul H. Nitze, who was appointed deputy secretary of defense June 10, **Aug. 4**

Johnson nominates Secretary of Defense Robert S. McNamara as president of the World Bank, succeeding retiring George D. Woods, **Nov. 27**

URUGUAY

Oscar D. Gestido is inaugurated as president for a 5-year term, **March 1**

A summit conference of American presidents is held at Punta del Este, **April 12–14**

President Gestido declares a state of siege to control social and labor disorders, **Oct. 9**

A 100% devaluation of the peso is announced, **Nov. 6**

President Gestido dies of a heart attack; Jorge Pacheco Areco is sworn in as president, **Dec. 6**

VENEZUELA

Constitutional guarantees, restored March 2, are suspended again following guerrilla assassination of the brother of Venezuela's foreign minister, **March 3**

Organization of American States (OAS) report substantiates Venezuelan charges that Cuban government was behind guerrilla landing near Caracas, Venezuela, in May, **June 26**

Caracas and nearby towns are rocked by series of earthquakes; death toll stands at 277, **July 29**

VIETNAM, South—See also Vietnam War

Premier Nguyen Cao Ky begins a 10-day visit to Australia and New Zealand, **Jan. 18**

Constituent Assembly adopts new constitution, **March 18**

Premier Ky and Chief of State Nguyen Van Thieu confer with U. S. President Johnson in Guam, **March 20–21**

Voting begins for village and hamlet officials in elections scheduled to continue for 10 Sundays, **April 2**

Ellsworth Bunker replaces Henry Cabot Lodge as U. S. ambassador to South Vietnam, **April 25**

Nguyen Van Thieu wins a 4-year term as president, and Nguyen Cao Ky becomes vice president; Senate elections are held on the same day, **Sept. 3**

Electorate goes to the polls again to elect 137-member House of Representatives, **Oct. 22**

President Thieu is inaugurated; appoints Nguyen Van Loc premier, **Oct. 31**

UPI

VIETNAM WAR: A wounded Marine is helped to an evacuation area following a fierce battle for Hill 881 in April. The peak overlooks the U. S. garrison at Khe Sanh, which came under siege in 1968.

WIDE WORLD

VIETNAM WAR: U. S. Marines suffered heavy casualties near the demilitarized zone in 1967. Here, wounded are taken to a helicopter after an ambush near Con Thien.

VIETNAM, North—See also Vietnam War

Hanoi discloses that Presidents Johnson and Ho Chi Minh exchanged letters on peace talks; Johnson's letter, dated Feb. 2, suggested private talks between the two leaders, but the proposal was rejected by Ho on March 10, **March 21**

General Vo Nguyen Giap, North Vietnam's defense minister, predicts that the Vietnam War will be long and protracted; considers present situation a stalemate advantageous to North Vietnam and the Vietcong, **Oct. 9**

VIETNAM WAR

Four-day cease-fire begins celebration of lunar New Year; U. S. and South Vietnamese troops resume fighting after 96 hours, and United States resumes bombing of North Vietnam after 5-day pause, **Feb. 8–13**

For the first time U. S. artillery pieces shell targets in North Vietnam, **Feb. 24**

President Johnson and top U. S. officials discuss war with South Vietnamese leaders on Guam, **March 20–21**

Hitherto unpublicized exchange of letters in February and early March between President Johnson and President Ho Chi Minh of North Vietnam is revealed; Ho rejected Johnson's offer of direct talks to end the war, **March 21**

U. S. Navy bombers hit two power plants on the outskirts of Haiphong, North Vietnam—the first time that the port city has been bombed, **April 20**

U. S. bombers hit electrical power plant in downtown Hanoi, North Vietnam, **May 20**

Rocket attack by enemy on U. S. airbase at Danang kills 12 U. S. servicemen and wounds more than 100; damage to airfield and aircraft is estimated at $25 million, **July 14**

U. S. military authorities say month-long assault on Marine outpost of Conthien is broken, **Oct. 4**

Thousands protesting Vietnam War are repulsed by federal marshals and soldiers in an attempt to enter the Pentagon in Washington, **Oct. 21**

Vietcong soldiers attack U. S. Special Forces camp at Locninh; reinforced U. S. troops rout Vietcong, of whom 918 are reported killed, **Oct. 29–Nov. 3**

Gen. William C. Westmoreland, U. S. commander in South Vietnam, states that allied forces are "winning a war of attrition" and that some U. S. troops might be withdrawn within two years, **Nov. 19**

Hill 875 falls to U. S. troops in bitter fighting after 3-week battle for ridges overlooking Dakto; American toll put at 274 dead, **Nov. 23**

Death toll of U. S. servicemen in Vietnam in 1967 reaches 8,001; 9,566 South Vietnamese soldiers are reported dead, **Nov. 30**

President Johnson visits U. S. troops in South Vietnam after attending funeral of Australia's Prime Minister Harold Holt in Melbourne and conferring with South Vietnamese officials there, **Dec. 23**

North Vietnamese Foreign Minister Nguyen Duy Trinh pledges that his country "will hold" talks on "questions concerned" when U. S. bombardment of the North is unconditionally terminated, **Dec. 30**

WASHINGTON, D. C.

Federal judge orders busing of pupils and rules against de facto segregation in Washington schools, **June 19**

President Johnson names Walter E. Washington commissioner of Washington, D. C., under new plan of municipal government adopted Aug. 9; Washington is first Negro chief executive of a major U. S. city, **Sept. 6**

Johnson signs $500,954,300 appropriations bill for the District of Columbia, **Nov. 13**

WILSON, Harold—See also Great Britain

Meets with Italian Premier Aldo Moro in Rome to discuss Britain's entry into Common Market, **Jan. 15–17**

Appeals to Consultative Assembly of the Council of Europe at Strasbourg, France, for British entry into Common Market, **Jan. 23**

Discloses that he and Soviet Premier Kosygin had jointly tried to effect a Vietnam truce during Kosygin's visit to Britain (Feb. 6–13), **Feb. 14**

Meets in Washington with President Johnson, declares that Israeli-Arab crisis could lead to general war, **June 2**

Returns to London after 2-day meeting with President de Gaulle in Paris; announces he and French president plan to work together in Middle East crisis, **June 20**

Reshuffles his cabinet and assumes post of minister for economic affairs, **Aug. 28**

After devaluation of the pound, calls on British people to help aid the economy, **Nov. 19**

YEMEN

U. S. terminates AID program after its offices in Taiz are attacked and two AID officials are arrested, **April 28**

President Abdullah al-Salal refuses to meet with 3-nation Arab commission seeking compromise solution to civil war, **Oct. 4**

Al-Salal is overthrown in a bloodless coup; dissident republican leader Abdul Rahman al-Iryani is named provisional head of state, **Nov. 5**

Last Egyptian troops leave Yemen, **Dec. 8**

YUGOSLAVIA

The Federal Assembly adopts six amendments to the constitution, **April 19**

Writer Mihajlo Mihajlov is sentenced to 4½ years' imprisonment for "spreading false information," **April 19**

President Tito is reelected, **May 17**

New Federal Executive Council (cabinet) is elected, **May 18**

Yugoslavia breaks diplomatic relations with Israel, **June 13**

Racial violence swept many U.S. cities in 1967. This is Newark, N.J.

THE AMERICANA ANNUAL

Kosygin and Johnson (with interpreter) at Glassboro.

REVIEW OF THE YEAR

U.S. paratroopers honor fallen comrades (symbolized by boots) in South Vietnam.

UPI

HURRICANE BEULAH hits the Texas coastal area in September and drives these shrimp boats aground at Port Isabel.

ACCIDENTS AND DISASTERS

Every three seconds—the time required to take one breath—someone in the United States suffers a disabling injury from an accident, according to the National Safety Council.

Accidents in the United States. In the first eleven months of 1967, accidental deaths totaled about 101,900, a 1% decrease from the same period in 1966. On the basis of rates established during the first eleven months of 1967, motor vehicle fatalities may nearly equal the record toll of 53,000, set in 1966.

Motor vehicle and public accidents showed no change in the number of fatalities compared with the same period in 1966. Home fatalities were down 3% and work fatalities decreased 1%.

ACCIDENTAL DEATHS IN THE U.S., 1962–67

Year	Total[1]	Motor vehicle	Public nonmotor vehicle	Home	Work
1962	97,139	40,804	17,000	28,500	13,700
1963	100,669	43,564	17,500	28,500	14,200
1964	105,000	47,700	18,500	28,000	14,200
1965	108,004	49,163	19,500	28,500	14,100
1966	113,000	53,000	19,500	29,500	14,500
1966 (Jan.-Nov.)	103,000	47,960	18,200	26,700	13,400
1967 (Jan.-Nov.)	101,900	47,810	18,200	25,900	13,200

[1] Duplication between motor vehicle, work, and home accidents are eliminated in total. (Sources: National Center for Health Statistics and National Safety Council.)

Accidents remained the fourth leading cause of death in the United States in 1966, exceeded only by heart disease, cancer, and vascular lesions. For persons between the ages of one and 37, accidents were the leading cause of death. This was in spite of the fact that between 1912 and 1966 accidental deaths per 100,000 population were reduced 29%, from 82 to about 58. It is estimated that if this rate had not been reduced, 1.2 million more lives would have been lost.

All accidents in 1966 took 113,000 lives in the United States—an increase of 5% over 1965. The 1966 fatality rate also increased to 57.7 from 55.7 deaths per 100,000 persons in 1965. Of the major causes of accidental deaths in the United States in 1966, motor vehicle accidents took 53,000 lives; falls, 20,000; fires and burns, 7,900; drownings, 7,000; poisonings, 3,600; firearms accidents, 2,600; and accidents involving machinery, 2,100. Besides accidental deaths, 10,800,000 persons were accidentally injured in 1966.

Costs of Accidents. It is estimated that accidental deaths and injuries cost the nation $20 billion in 1966. These costs included wage losses, medical fees and expenses, insurance administrative costs, property damage and destruction, and lost production. On-the-job accidents alone cost U. S. industry $6.8 billion, about $90 for every employee.

Canada. Canada reported 10,978 accidental deaths in 1965. That nation's death rate per 100,000 was 56.1, up from 54.9 in 1964. Motor vehicle accidents claimed 5,049 lives in 1965—more than any other accidental cause of death—followed by falls (1,635), drownings (1,119), fire and burns (656), railroad accidents (249), and gas poisoning (155).

TAD Project. In 1967 the state of Oregon tested a new method of traffic accident reporting that could eventually help the nation's police pinpoint crash causes. The National Safety Council's Traffic Accident Data (TAD) Project developed the new system, which was scheduled for statewide use in 1968. Under the new method, a minimum of essential facts is collected on every accident reported. On a sampling basis, a supplementary section of the accident report goes into greater depth on a selected factor of the vehicle or driver.

HOWARD PYLE
President, National Safety Council

MAJOR ACCIDENTS AND DISASTERS OF 1967

AVIATION

Marine Corps Reserve bomber crashes into a retirement community southeast of Los Angeles after air collision with second plane; 4 persons killed, 5 injured, Jan. 22

All 38 persons aboard an airliner are killed in crash near Findlay, Ohio, Mar. 5

Brazilian jetliner crashes in Monrovia, Liberia, killing 48 of 89 aboard, Mar. 5

Jetliner carrying 25 persons and a light plane with one aboard collide near Urbana, Ohio, killing all involved, Mar. 9

U. S. Navy C-47 crashes near Phanrang, South Vietnam, killing all 25 on board, Mar. 10.

South African turboprop crashes in Indian Ocean, killing all 25 on board, Mar. 13

DC-8 jetliner on a training flight crashes into motel on the edge of New Orleans airport, killing 6 persons on plane and 12 on the ground, Mar. 30

South Korean C-46 crashes in densely populated area of Seoul, 57 persons killed, Apr. 8

Algerian DC-4 crashes in Sahara desert, killing at least 35 persons, Apr. 11

Swiss jetliner crashes on Cyprus, killing 124 of 130, Apr. 20

U. S. Air Force radar picket plane crashes off Nantucket Island, killing 15 of 16 crewmen, Apr. 25

Crash of British airliner in Pyrenees kills all 88 aboard, June 3

Crash of British charter DC-4 in Stockport, England, kills 72 of 84 aboard, June 4

Airliner collides with private plane in North Carolina killing 82 persons, including Secretary of the Navy-designate John T. McNaughton, his wife, and son, July 19

Czech airliner crashes during takeoff at Gander, Newfoundland, killing 34 persons, Sept. 5

British airliner crashes off southwest Turkey after explosion in air, killing all 66 persons aboard, Oct. 12

Spanish jet airliner crashes into wooded area in Surrey, England, killing all 37 persons aboard, Nov. 4

Airliner crashes one mile short of runway at Greater Cincinnati Airport, killing 66 of 82 persons aboard, Nov. 20

DC-4 crashes into mountain in jungles of Huánuco, Peru, killing 67 persons including 4 Americans, Dec. 8

EARTHQUAKES

Andean village, Guacamayas, in Colombia, is wiped out by earthquake; 100 persons killed, Feb. 9

Earthquake in Java kills 51, injures about 300, Feb. 20

Turkey hit by three severe quakes in eight-day period; more than 200 persons killed, July 22–30

Caracas, Venezuela, and nearby towns rocked by three earthquakes; 277 persons killed and more than 1,700 injured, July 29

Earthquake shakes 500-mile stretch of India's west coast, killing 172 persons, injuring more than 1,000, Dec. 11

FIRES

McCormick Place, Chicago's lakefront exhibition center, is ruined by fire, Jan. 16

Penthouse restaurant in downtown Montgomery, Ala., swept by fire; at least 25 persons killed, Feb. 7

Worst forest fires in history of Tasmania wipe out 12 townships around capital city, Hobart; at least 55 persons killed Feb. 7

French orphanage at Taninges gutted by fire; 18 children killed, Mar. 6

L'Innovation, major department store in Brussels, Belgium, razed by fire that kills 322 persons, May 23

Flash fire in prison camp in Jav, Fla., kills 37 inmates, July 16

U. S. aircraft carrier *Forrestal*, off North Vietnam, sustains damage estimated at $100 million as fires set off by explosions on flight deck kill 129 crewmen, July 29

FLOODS AND LANDSLIDES

Torrential rains cause floods and mudslides at Rio de Janeiro and Sao Paulo, Brazil, leaving about 200 dead, hundreds missing, Jan. 23

Rio de Janeiro, Brazil, hit by tropical rains again, suffers floods and landslides; 119 persons dead, Feb. 20

Landslides caused by heavy rains kill more than 100 persons in Caraguatatuba, Brazil, Mar. 19

Fairbanks, Alaska, is devastated by flooding of Chena River; 6 persons dead, damage estimated at $175 million, Aug. 14–15

Niigata and Yamagata provinces, Japan, hit by floods, 53 persons killed, Aug. 31

Record rainfall and floods kill 457 persons in area around Lisbon, Portugal, Nov. 25

STORMS

Record-breaking blizzards and winds paralyze much of the Midwest; 76 persons killed in 5 states, Jan. 25–26

Violent storms batter northern Europe, causing more than 40 deaths, Feb. 23–24

Tornadoes in Chicago, Ill., area kill 55 persons, injure 1,500, Apr. 21

Southern Minnesota hit by six tornadoes; 16 persons killed, Apr. 30

Cyclone near Dacca, East Pakistan, kills at least 50 persons, May 1

Typhoon hits Kyushu and Honshu islands, Japan; 300 persons killed, July 9

Heavy monsoon rains cause at least 210 deaths in northern and central provinces of India, Sept. 5–9

Hurricane Beulah strikes Dominican Republic and southern Haiti, killing at least 18 persons, Sept. 11

Texas coast battered by Hurricane Beulah, causing floods that killed 37 persons and caused $1 billion in property damage, Sept. 20–24

Typhoon Emma kills at least 24 persons and causes extensive damge in central Philippines, Nov. 4

MISCELLANEOUS

Two buses collide and plunge into a gorge 45 miles from Manila, Philippine Islands, killing 87 persons, Jan. 6

Soviet fish-processing vessel sinks off coast of Denmark: 57 of 79 on board are drowned, Feb. 28

Underground mine explosion near Natal, British Columbia, kills at least 14 miners, Apr. 3

In Peshawar, Pakistan, 25 persons are burned to death in crash of station wagon in which they were riding, May 8

Fifty African miners are suffocated or crushed to death during panic in shaft of mine near Johannesburg, South Africa, July 25

Excursion train falls off cog railway at Mount Washington, N. H., killing 8 persons, injuring 30, Sept. 17

Riot at soccer game in Kayseri, Turkey, leaves 42 persons dead, 600 injured, Sept. 17

Insecticide contaminates bakery products in Tijuana, Mexico, killing 17 persons, Sept. 27

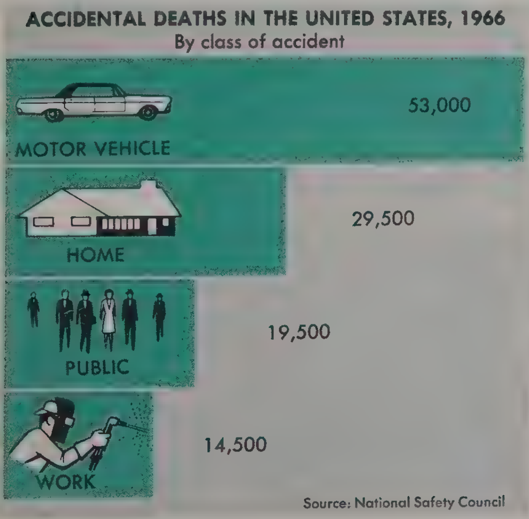
Express train derails near London; 51 persons killed and 111 injured, Nov. 5

Bread contaminated by rat poison kills 77 persons in Chiquinquira, Colombia, Nov. 25

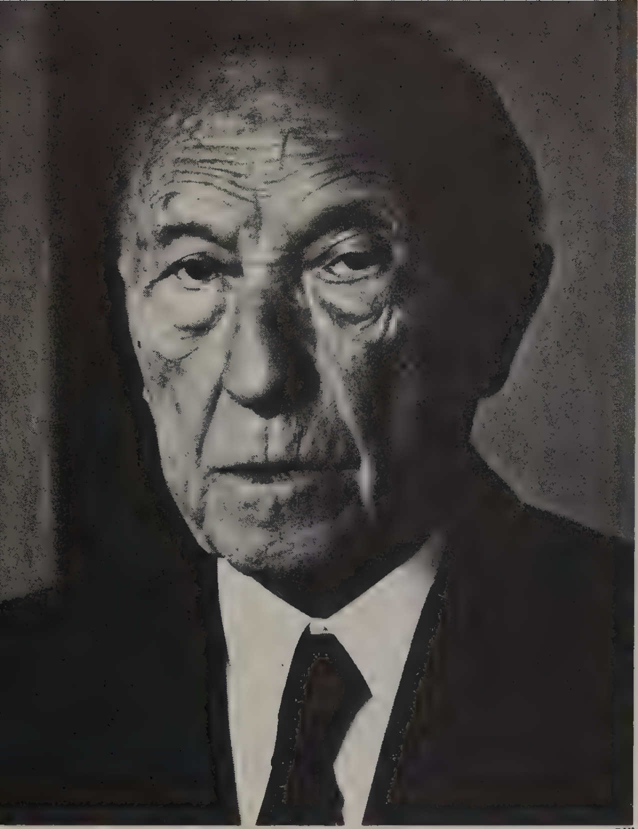
Suspension bridge over the Ohio River between Point Pleasant, W. Va., and Kanauga, Ohio, collapses; at least 46 persons killed, Dec. 15

KEYSTONE

LONDON-BOUND TRAIN that overturned on the evening of November 5, killing 51 persons and leaving 111 others injured, is examined on the morning following the disaster.


ACCIDENTAL DEATHS IN THE UNITED STATES, 1966
By class of accident

Source: National Safety Council



PIX

KONRAD ADENAUER, leader of West German recovery following World War II, died in April 1967 at the age of 91.

ADENAUER, Konrad

West German political leader: b. Cologne, Jan. 5, 1876; d. Rhöndorf, Rhineland, April 19, 1967.

Konrad Adenauer achieved historic stature as the statesman under whose leadership West Germany recovered from World War II in an amazingly short period of time. High credit must go to him for building up a peaceful democratic state in Germany, and maintaining the political stability that in turn made economic recovery possible. Adenauer succeeded in gaining for the new Germany the confidence of Western nations. He became one of the foremost champions and architects of European integration.

Adenauer was not a sophisticated intellectual, but he possessed extraordinary political shrewdness. He was a great political tactician among politicians, but at the same time he had the gift of making political issues clear to the people. Ministers and parliamentary deputies complained about his imperiousness and autocratic manners. Although he did not hesitate to use the authority that his office conferred on him, he recognized the rules of the game in a democracy. As a public speaker he was sober and without affectation, and his diplomatic partners could rely on his word.

Konrad Adenauer was born in Cologne, the son of a court clerk. He went to school in Cologne and from 1894 to 1897 studied law at the universities of Freiburg, Munich, and Bonn. In 1906 he became a city councilman in Cologne, and in 1909 first city councilman.

Mayor of Cologne. In 1917, Adenauer was elected lord mayor of Cologne. In spite of the adversity of the times after World War I, Adenauer proved himself a singularly active and successful administrator. His first major achievement was the founding and development of a university in Cologne, followed later by a school of music and a school of athletics. He attracted industrial firms, including the German Ford works, to Cologne in order to create jobs. The port facilities on the Rhine were expanded, and facilities for holding trade fairs in Cologne were built. For recreation, large sports fields were constructed and a broad belt of parks laid around the old city by using the land that became available as fortifications were removed. He was also responsible for the construction of the first autobahn (superhighway) in Germany, from Cologne to Bonn.

In 1933 the Nazis removed Adenauer from office. During the course of the next 12 years they arrested him twice and finally sent him to a concentration camp. But he managed to survive these years by secluding himself in a small house on the Rhine, not far from Bonn, which remained his residence until his death.

After the occupation of Cologne in 1945, Adenauer was reinstalled by the U.S. Army as lord mayor of the city. But the British commanding officer disliked Adenauer's strong opinions and his methods of administration. On Oct. 10, 1945, he abruptly dismissed Adenauer from the office. It was in all probability a lucky event. If he had continued in the mayor's chair, Adenauer, now close to 70, might have been satisfied to resume his work for the community that he had served earlier.

Founding of the CDU. Removed from his post, he devoted himself entirely to the building of a large party that was to be a bulwark against bolshevism and a safeguard of Christian tradition in the future Germany. Adenauer recognized that for this purpose the mere revival of the old Roman Catholic Center party, to which he himself had belonged, would not suffice. The new party would have to appeal not only to Roman Catholics but to Protestants as well. Under the Nazi regime both Catholics and Protestants had learned that they had common interests to defend. Thus, the new Christian Democratic Union (CDU) could be created.

Adenauer became its chairman in the British occupation zone. He also became a member of the diet of North Rhine-Westphalia and was made chairman of the CDU delegation in the diet. In 1948 the Allied military governors called a "parliamentary council" in Bonn. It was a body of 65 members, all of them delegates of the existing 11

IMPORTANT DATES IN ADENAUER'S LIFE

Born in Cologne, Jan. 5, 1876.
Married Emma Weyer, 1904.
Became a Cologne councilman, 1906.
Elected lord mayor of Cologne, 1917.
Married Auguste Zinsser, 1919.
Removed from office by Nazis, 1933.
Reinstalled as lord mayor by Americans, 1945.
Dismissed from office by British authorities, 1945.
Helped to organize the CDU, 1945.
Presided over the parliamentary council, 1948–49.
Chosen chancellor of West Germany, Sept. 15, 1949.
Accepted independent status for West Germany, May 5, 1955.
Signed Franco-German friendship treaty, Jan. 26, 1963.
Resigned the chancellorship, Oct. 15, 1963.
Died in Rhöndorf, April 19, 1967.

UPI

Adenauer (*from left to right*) as a young boy, as a young man at the turn of the century, as mayor of Cologne (in which post he served from 1917 to 1933), and at the age of 50.

KONRAD ADENAUER

From the ashes of World War II, "Der Alte" restored his country to the world community.

Although active in German politics most of his life, Konrad Adenauer achieved international prominence only when he was more than 70 years old. As West German chancellor from 1949 to 1963 he dealt largely with elder statesmen who came into power after World War II. With international affairs dominated by the political style of such men as Eisenhower and de Gaulle, he functioned with unique effectiveness in bringing his country back into the family of nations.

At a 1966 political rally, Adenauer confers with Ludwig Erhard, who succeeded him as chancellor of West Germany.

PICTORIAL PARADE

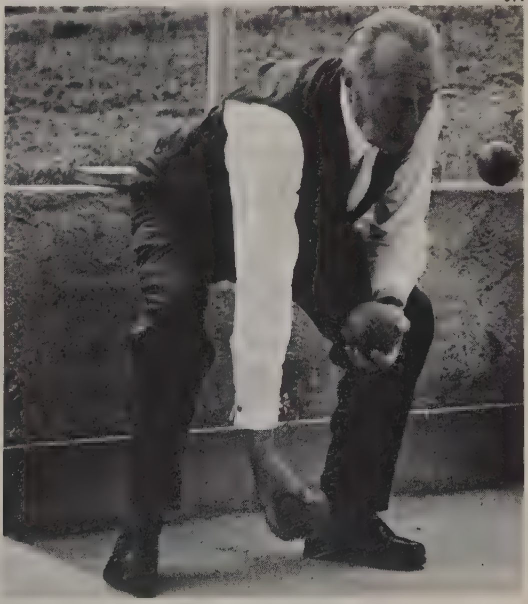
During the 1950's, Adenauer formed close ties with President Dwight Eisenhower, with whom he is shown in 1954.

UPI

BLACK STAR

(*Above*) With French President Charles de Gaulle, Adenauer brought about cooperation between France and Germany, in spite of the enmity remaining after three Franco-German wars. (*Below*) Adenauer relaxes at his Italian villa in 1960.

UPI



provincial diets. On Sept. 1, 1948, Adenauer was elected president of this council, which was charged with drafting a constitution for West Germany as a whole.

Adenauer took an active lead in the deliberations for a constitution. The document tried to improve on the Weimar constitution—for example, the federal president, in contrast to the president of the Weimar Republic, would exercise very limited powers, which, however, made it necessary to strengthen the position of the federal chancellor. In May 1949 the parliamentary council passed the constitution, which was also approved by the military governors and the provincial diets.

The Chancellorship: Western Cooperation. On Aug. 14, 1949, elections were held for the first federal parliament. A month later, on September 15, the parliament elected Adenauer the first federal chancellor. It is probably correct to say that Adenauer elected himself, because he received only a one-vote majority. He formed a government in coalition with the Free Democratic and the German parties. The new government, however, was not sovereign. Although Allied military government in the strict sense was abolished, the Allied governments retained far-reaching powers in Germany, which they exercised through high commissioners. But step by step Adenauer persuaded the Allies to turn over additional power to the German government. In May 1955 the German government, for all practical purposes, gained sovereignty and equality among the nations. The Allied powers merely retained control over Berlin and the right to intervene in case of an emergency.

The Chancellor left nobody in doubt that Germany's place was among the Western nations and that Germany's democratic future would be best safeguarded by its close integration into a supranational European union. He accepted eagerly the proposal of French Foreign Minister Robert Schuman to pool the coal and iron production of the western European states. In July 1952 the European Coal and Steel Community, formed by France, Germany, Italy, and the three Benelux countries, became operative.

Adenauer did not hesitate to promise the Western Allies a German contribution for the defense of western Europe after the outbreak of the Korean War revealed the need for larger security forces in Europe. It took great courage to make such a proposal, because there was strong opposition in Germany to rearming. Adenauer again wanted to make German rearmament a means for European integration. He did not wish to resurrect a German army but to contribute to a European army consisting of mixed national units. The projected defense community finally failed, however, because the French parliament rejected the plan. The Federal Republic became instead a member of the Western European Union and of the North Atlantic Treaty Organization (NATO) in 1954. All German armed forces were placed under NATO. At the time of Germany's accession to NATO the German government renounced any production of atomic, biological, or chemical weapons.

The failure of the European Defense Community blocked progress toward European political integration. But economic integration took a big step forward with the Rome treaties of 1957. These treaties committed the six nations to abolishing internal customs by stages and to forming a common market and customs union. Simultaneously a European atomic community was created to carry on research for the peaceful use of atomic energy.

Franco-German Friendship. Adenauer was always convinced that the union of Europe depended chiefly on rapprochement between France and Germany. He conducted negotiations with France on the return of the Saar to Germany in a way that left no ill feelings in France. In 1957 the Saar was reincorporated into Germany. In the following years close relations developed between Adenauer and President de Gaulle. Finally, on Jan. 26, 1963, Adenauer and de Gaulle signed a Franco-German friendship treaty providing for cooperation between the two countries on all important questions of foreign policy, defense, education, and youth.

Reparations to Israel. Adenauer felt it to be the moral obligation of Germany to compensate Israel, as much as it could, for the losses that the Jews had suffered in Germany prior to and during World War II. In 1953 he concluded with Israel an agreement by which Israel received substantial German payments over a period of years.

Domestic Policies. In his domestic policies Adenauer aimed in particular at the creation of social justice in the Federal Republic. For this reason he was willing to have the government accept considerable social burdens. Although this policy necessitated large government expenditures for welfare purposes, it created a favorable social climate. Communism, as a result, gained no foothold in West Germany.

Later Years. Adenauer's popularity reached its height in 1957 when the CDU managed to gain a majority in the elections. But after 1959—when he announced his candidacy for the office of federal president but quickly withdrew when he realized that as federal president he would have much less power than he possessed as chancellor—his reputation came under a cloud. It was also felt that he used his authority too readily to protect his ministers or staff members against well-justified criticism. He was reelected chancellor for the fourth time after the elections of 1961, but his party made it a condition that he would resign early enough to give a successor sufficient time to prepare himself for the next federal elections.

After more than 14 years as chancellor, "der Alte" (the Old Man) resigned on Oct. 15, 1963. He was displeased that Ludwig Erhard followed him in the chancellor's office, and he did not hesitate to continue his criticism of Erhard in private life.

Adenauer died on April 19, 1967. The state funeral that he received, which was attended by presidents Johnson and de Gaulle, among other foreign leaders, testified to the respect that Adenauer had gained not only in Germany but throughout the non-Communist world.

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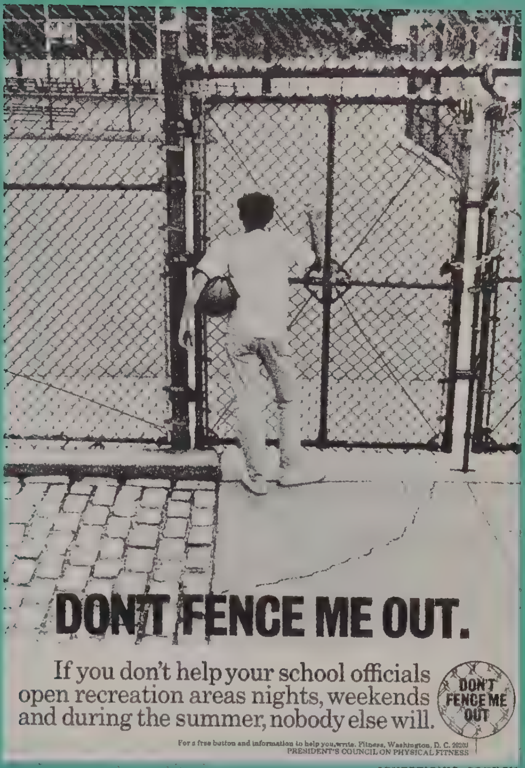
HAJO HOLBORN
Yale University

NEW YORK TIMES

GIRL DECIDES NOT TO SMOKE in a November Public Broadcast Laboratory TV ad rebutting cigarette commercials.



DON'T FENCE ME OUT.

If you don't help your school officials open recreation areas nights, weekends and during the summer, nobody else will.

For a free button and information to help you, write: Fitness, Washington, D. C. 20203
PRESIDENT'S COUNCIL ON PHYSICAL FITNESS

ADVERTISING COUNCIL

POSTER AD for public cooperation in physical fitness programs was produced by the Advertising Council in 1967.

ADEN. See COMMONWEALTH OF NATIONS; GREAT BRITAIN; MIDDLE EAST; UNITED ARAB REPUBLIC.

ADVERTISING

When the economic outlook becomes murky, advertising is often the first expense that corporations curtail. This point was reaffirmed in 1967. Advertising expenditures in all kinds of media in the United States totaled $16.89 billion, an increase of 2% over expenditures in 1966. But media costs had increased by more than 2%, and thus the physical volume of advertising space and time decreased for the first time in a decade.

Revenues. Television was the only medium to have a truly good year. National advertisers spent $2.49 billion on network and spot television, or 5.7% more than the record high in 1966.

The biggest loss was suffered by network and spot radio, which showed a decrease of 4.5% to $343 million in spending by national advertisers.

National advertising in newspapers dropped 2.1% to $955 million. Magazine advertising rose 1.2% to $1.31 billion. Advertising in business papers (trade and merchandising publications) increased 1.1% to $719 million. In 1967 National advertisers increased their spending on outdoor advertising by 2% to $120 million.

Spending by national advertisers in all media (including direct mail, point-of-purchase displays, specialties, and others that are not measured individually) increased 2.6% to $10.37 billion. Local advertisers spent $6.59 billion, or 0.5% more than the total in 1966.

Advertising expenditures were stifled in the fall by the Ford Motor Company strike that halted production of the new 1968 models. Introductory advertising was held back by Ford and its dealers until November.

Controversies. Because of its ubiquity and intentional obtrusiveness, advertising is always subject to criticism. The chief controversies involving advertising in 1967, however, centered on whether advertising adequately performs its economic function and whether brand names are of value to consumers.

At the year's end, the Senate passed a bill that, in effect, would require doctors to prescribe drugs by generic names, rather than brand names, for patients under the Medicaid plan. Brand-name pharmaceuticals generally cost more than those without brand names, with advertising and promotion expenses being a major reason for the difference.

Similarly, the Federal Trade Commission (FTC) said it plans to require analgesic advertisers to prove claims that their products are more effective than ordinary aspirin. This is based on the assumption that all of the popular analgesics are equally effective in the same quantities, whether or not an ingredient is added to the basic aspirin formulation.

This same point was made in "commercials" on the Public Broadcast Laboratory, a new program carried by 119 educational television stations.

Advertisers have traditionally argued that advertising is a "value added' to the product because the manufacturer's goodwill is at stake. This position was upheld by the Court of Appeals in Chicago when it upset a Federal Trade Commission decision against the Borden Company. In a 10-year-old case, the commission had ruled that Borden was guilty of price discrimination when it sold condensed milk under the Borden brand for more than it sold the same milk with no brand to supermarkets.

In another controversial action, the FTC issued complaints charging false advertising by nine apartment developers because their advertisments did not disclose that "the apartments are not available to applicants who are Negro."

WALTER JOYCE
Editor, "Marketing/Communications"

AEROSPACE INDUSTRY

Aerospace industries continued their preeminence in 1967 as the major research and development enterprise in the world. Besides producing aircraft, spacecraft, and missiles, they provided new technologies for general industrial use.

United States. The U. S. aerospace industry began 1967 with the expectation that sales would crest around $26 billion—a $2 billion rise over 1966 and an $11 billion increase from five years earlier. With a $28 billion backlog of business at the beginning of 1967, aerospace firms had $10 billion more in orders than at the beginning of 1966. The heavy requirement for military products for the Southeast Asia conflict and a record demand for new civil aircraft contributed to the increase in backlog. Because demand for U. S. commercial jet transports more than doubled in 1966, the industry had a backlog of $10 billion in jet orders in early 1967.

New problems faced the U. S. aerospace industry in 1967 in financing, developing, and planning new production facilities to meet burgeoning military and civil orders for "hardware," the industry's term for completed products, as opposed to studies and designs.

Missiles. Needs increased for both tactical and strategic missiles in 1967. The Vietnam War created heavy production demand for air-to-air, air-to-ground, and air defense missiles of all varieties, plus development requirements for an improved new generation of these missiles. Production was increased for the Minuteman 3 and the submarine-launched Poseidon to counter Soviet deployment of an intercontinental ballistic missile defense system. Programs for development of new reentry vehicles, penetration aids, and multiple warheads for ICBM's underwent major expansion. (See also MISSILES.)

Aircraft. Military aircraft production continued at peak rates. Introduction of new subsonic commercial jet transports continued, but there were some delivery delays because of military priorities. Firm design and production of the U. S. supersonic transport by the Boeing Company neared fruition.

Space Technology. Sales in space technology during 1967 were expected to top $7 billion. Adding to the increased sales in this area were military space expenditures. The manned orbital reconnaissance laboratory (MOL) headed toward flight hardware construction. There were increased requirements for unmanned communication, navigation, and reconnaissance operational satellite systems.

Business Flying. Delivery of more than 500 new turbine-powered aircraft plus a 10% to 15% increase in deliveries of piston-powered aircraft in 1967 were expected to push this segment of the industry into the billion-dollar class for the first time. Executive jet transports accounted for about half the dollar volume of 1967 sales. They boosted the operational jet fleet to about 1,400 aircraft by the end of 1967, radically changing the character of business flying. Initial success of the jet-powered executive transport for business uses was evidenced in 1967 by plans of most major manufacturers to introduce new larger-capacity and longer-range models in the next few years. The new models will provide the same mobility for international travel that executive jets now offer in domestic business flying.

Other Fields. This segment of the aerospace industry accounted for a small part of aerospace sales in 1967, but in the next few years it is expected to broaden rapidly. It involves applying aerospace technologies, including management skills, to other areas of the industrial, economic, and social spectrum. Products range from aircraft gas-turbine power plant applications (for high-speed boats, trains, air cushion vehicles, and generating electricity) to integrated transportation systems for the developing countries. Also included are deep sea research, shipbuilding systems management, and automated medical systems. Sales in these areas totaled slightly more than $2 billion in 1966 and increased to over $2.5 billion in 1967.

Sales. Data supplied by the Aerospace Industries Association of America show that aerospace sales in 1966, by product group, were: aircraft, $11,951,000,000; missiles, $4,052,000,000; space vehicles, $5,903,000,000; and nonaerospace products, $2,323,000,000. The contribution to the gross national product by the aerospace industry rose from 1.7% in 1965 to 1.8% in 1966.

Britain. The British aerospace industry, with an all-time high annual record of nearly $600 million

EXECUTIVE JET TRANSPORTS of a type increasingly popular in 1967 near completion at a British plant. The twin-engine jets can fly at speeds over 500 miles per hour.

HAWKER SIDDELEY AVIATION LTD.

in exports behind it from 1966 efforts, moved toward a period of production stability during 1967. Agreements with France in 1966 and 1967 on large-scale military orders solidified the position of Britain's main airframe manufacturers, but a reduction in employment was inevitable, according to industry analysts.

The United Kingdom's defense posture was still in a state of transition, and a gradual move toward a firm government commitment in the size and scope of its defense requirements remained of primary importance to its aerospace industry. About half of the industry's 250,000 employees were in defense work in 1967.

France. The French aerospace industry took strides in 1967 to streamline its operations through plans for consolidating its two major national groups —Nord and Sud.

Competition between the two national groups would be eliminated under this merger concept by shifting all aircraft development responsibility to Sud and all missile and launch vehicle work to Nord. French government spokesmen advocated this approach because the cost of developing advanced aircraft and space systems could no longer be justified for the French national market alone. Consolidation plans also included merging the nation's major private companies.

During 1967 French aerospace industry total sales were expected to peak out around $1.25 billion, compared with $1.1 billion in 1966. Exports for the industry in 1967 were about $580 million, compared with $500 million for the previous year.

(See also AVIATION; SPACE EXPLORATION.)

BERNARD K. THOMAS, JR.
"Aviation Week & Space Technology"

AFGHANISTAN

The reform cabinet of Premier Mohammed Hashim Maiwandwal, which was installed in November 1965 and which is supported by the King, remained in office throughout 1967. Western-style political institutions, introduced by the constitution of 1964, operated with increasing effectiveness during the year. In March the government inaugurated a third 5-year economic plan, calling for a 25% increase in expenditures for national development.

In its foreign relations, Afghanistan continued a policy of "active nonalignment." It sought to retain the friendship of the United States and the Soviet Union, and to continue receiving aid from both countries, as well as from Communist China.

Economic Development. The third 5-year plan (1967–72) intensified the effort to give the largely agricultural and pastoral country a modernized and more productive economy. The new program emphasized the creation of a vigorous private sector in industry and commerce.

A foreign and domestic private investment law, enacted in January 1967, offered significant concessions in return for private investments of capital in industry, mining, agriculture, tourism, and the service industries. In the late summer, two U. S. loans of $12 million and $4.6 million were announced, the first to assist in the financing of a hydroelectric power plant to supply Kandahar, Afghanistan's second largest city, and the second to improve 5,000 acres of agricultural land in the Helmand and Arghandab valleys.

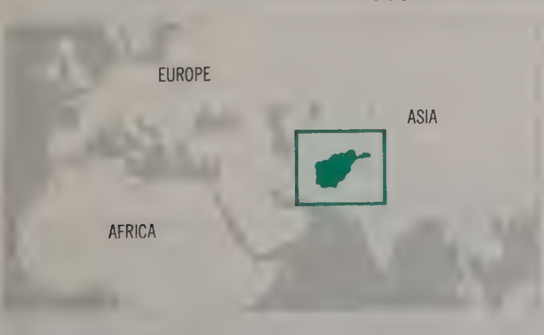
Foreign Affairs. On March 25, Premier Maiwandwal arrived in the United States for a 2-week visit. He conferred with President Johnson in Washington, D. C., where the President reportedly agreed to make $40 million in U. S. economic aid available to Afghanistan in 1967–68.

While relations with the United States were being cemented, those with the Soviet Union were also maintained on a cordial basis. From May 30 to June 2, Soviet President Podgorny paid an official visit to Afghanistan. In the interest of improving relations with two of Afghanistan's most important export markets, King Mohammed Zahir Shah made a state visit to India from January 28 to February 7 and, en route home, conferred in Rawalpindi with President Ayub Khan of Pakistan.

In June and July, Abdul Rahman Pazhwak, Afghanistan's principal representative at the United Nations and president of the 21st General Assembly, presided over the Assembly's special session on the Middle East crisis. During that session, the Afghanistan delegation supported attempts to secure Israeli withdrawal from Arab territory occupied during the 6-day conflict.

PAUL L. HANNA
University of Florida

AFGHANISTAN • Information Highlights



Area: 249,999 square miles (647,497 sq km).
Population: 15,960,000 (April 20, 1966, est.).
Chief Cities: Kabul, the capital, 449,500 (1965 census); Kandahar, 119,000 (1964 est.); Herat, 62,000 (1964 est.); Mazar-i-Sharif, 40,000 (1964 est.).
Government: *King*—Mohammed Zahir Shah (b. 1914, acceded 1933); *Premier*—Mohammed Hashim Maiwandwal (took office 1965). **Parliament**—Upper House (Meshrano Jirgah, or "House of Elders"), 87 members; Lower house (Wolesi Jirgah, or "House of the People"), 214 members.
Religious Faiths: Muslims, 99% of population.
Education: *Literacy rate* (1963), 10% of population. *Total school enrollment* (1964)—406,736 (primary, 358,037; secondary, 33,982; teacher-training, 5,716; technical, 5,550; higher, 3,451).
Finance (1966–67 est.): *Revenues,* $180,000,000; *expenditures,* $180,400,000; *monetary unit,* afghani (45 afghanis equal U. S.$1).
Cost of Living Index (1961), 98 (1958=100).
Manufacturing (metric tons, 1965): Cement, 170,000; sugar, 10,000; cotton yarn (1962), 300; lumber, 450,000 cubic meters.
Crops (metric tons, 1965–66 crop year): Sugar beets, 60,000; cottonseed (1967), 51,000; cotton (lint), 50,000.
Minerals (metric tons, 1965): Bituminous coal, 132,000.
Foreign Trade (1966): *Exports,* $72,880,000 (chief exports: fruits and nuts, $21,980,000; raw cotton, $16,770,000; karakul skins, $12,630,000; wool $17,420,000); *imports,* $55,310,000 (chief imports, 1965: petroleum products, $6,912,000; sugar, $4,837,000; tea, $4,572,000). *Chief trading partners* (1965): USSR (took 25% of exports, supplied 46% of imports); U. S. (took 16% of exports, supplied 15% of imports); West Germany (took 8% of exports, supplied 13% of imports).
Transportation: *Roads* (1965), 4,200 miles (6,758 km); *motor vehicles* (1965), 18,050 (automobiles, 8,800); *national airline,* Ariana Afghan Airlines; *principal airport,* Kabul.
Communications: *Telephones* (1966): 9,000; *radios* (1965), 200,000; *newspapers* (1965), 17 (daily circulation, 94,000).

AFRICA

UPI

GUERRILLA TRAINING in Tanzania for Black Africans of other nations provoked strong protest from South Africa. Shown at Bagamoyo are trainees from Mozambique.

AFRICA

The face of Africa changed little in 1967. Most of the major events of the year were little more than new manifestations of old, deep-rooted conditions—such as poverty and lack of development, chronic instability of regimes, and the general disparity between the frontiers of the new states and tribal and geographic realities. Every year seems to provide a new set of illustrations of the fact that existing state frontiers in Africa are monuments to the convenience and mutual rivalries and accommodations of certain 19th century European colonial powers—and only to such factors. The boundaries obviously were not drawn to fit African conditions.

Yet the African states that have emerged within these old colonial borders show little disposition to change their frontiers, for reasons that are quite understandable. A revision of boundaries would, in some cases, lead to one state's losing territory to another. African leaders are no more eager to accept such a result than are national leaders in other parts of the world; indeed, in view of the precarious tenure of power of many of the African leaders, they would be less able to survive a loss of territory.

The same considerations apply to possible changes that would give sovereignty to a part of an existing state that has an obviously distinct character. The right of self-determination applies to African areas with respect to European powers, but not to independence-seeking regions within an African state. Thus the integrity of existing African states, although often open to question in logic, is not open to question as a matter of practical politics. These attitudes explain the resistance to the attempted secession of Katanga province in the Congo (Kinshasa) in past years and the civil war in Nigeria in 1967.

Nigerian Civil War. The former reputation of Nigeria—the ex-British colony that is Africa's most populous state—as a model of functioning democratic and federal government had perished before 1967. It died with the murder in January 1966 of the federal prime minister and the premiers of two of the regions, the subsequent massacres of Ibos in the Northern Region, and the successive changes of regime in Lagos that reflected increasingly desperate endeavors to hold the country together in the face of regional separatism.

Disorder in Nigeria degenerated into civil war after the first five months of 1967 had been passed in largely verbal sparring between the two leading figures, Lt. Col. Yakubu Gowon, in power in Lagos and nominal ruler of all Nigeria since August 1966, and Lt. Col. Odumegwu Ojukwu, military governor of the Eastern Region. The conference of the supreme military council of Nigeria attended by the two men and held, significantly, at Aburi, Ghana, on January 4–5, produced an ephemeral agreement that was subject to different interpretations by Gowon and Ojukwu. Gowon was not ready to meet the demands of the Eastern Region leader for increased autonomy, especially in financial matters. A constitutional conference scheduled for May 5 never met. Attempted secession followed, with the vote of the Eastern regional assembly on May 27 in favor of independence and the proclamation on May 30 that the former Eastern Region of Nigeria had become the independent state of Biafra.

War did not begin until federal troops invaded Biafra on July 6. In August, Biafran troops swept into the Midwest Region, but this success was short-lived, and federal troops captured the Eastern (or Biafran) capital of Enugu on October 4. The war degenerated into a guerrilla struggle in the countryside. The Organization of African Unity (OAU), meeting in September, named a 6-nation mission to negotiate an end to the Nigerian conflict, but no settlement emerged from its meetings with both the federal and Biafran sides in November.

It was difficult to derive any clear conclusions from the tragic sequence of events in Nigeria. Ibo separatism in the Eastern Region had proved serious enough to lead to civil war. On the other hand, the reassertion of Nigerian national unity by the federal forces had been successful, at least in a military sense. Much would turn on how far the policy of amnesty toward the Ibos proclaimed by Gowon was observed in practice.

The Troubled Congo (Kinshasa). Nigeria provided the only example in Africa of organized war on any scale in 1967, but the Congo continued to present a picture of considerable disorder. President Joseph Mobutu retained the power that he had seized in November 1965, but the Congo seemed too large, too disorganized, too subject to tribalism and local influences, to be truly susceptible of being ruled by Mobutu or any likely successor. During the year Mobutu appeared to be following a restless search for new and attractive policies to organize his supporters, but in truth none of them seemed likely to have favorable effects. Nevertheless it may be that his policy, which the Washington *Post* (February 19) called one of "strident nationalism," is the only one with any chance of evoking unity in the chronically disunited Congo.

The remarkably tenuous nature of authority in the Congo was demonstrated once again in July and August by the panic shown over the activities in the eastern Congo of a quite small number (about 200) of white mercenaries, under Belgian-born Col. Jean Schramme, leading some 1,200 Katangese troops loyal to ousted former Premier Moïse Tshombe.

The mercenaries, who had been under contract to the Congolese Army, rebelled on July 5 and with their Katangese allies temporarily occupied Kisangani (formerly Stanleyville). Despite contrary claims by the Mobutu government, the Congo was not invaded by foreign mercenaries and there was no evidence of "imperialist aggression."

The rebel troops soon gave up the cities they had occupied, but their position proved impregnable when they retired to Bukavu near the Rwandan border. Their political purposes were not clear, and whatever these were they did not achieve them. Since the rebels could not be defeated, however, Mobutu agreed to an OAU plan to permit them to leave the Congo under international supervision. Schramme reportedly declined this offer of amnesty in October, but by November 5, after the Congolese Army had closed in on Bukavu, the rebels had fled to Rwanda. Several days later the army claimed to have driven back a force of invaders from Portuguese Angola.

While this rebellious situation was simmering in Katanga, former Premier Tshombe, once a Katangese secessionist leader and then exiled in Spain and under death sentence in the Congo, was kidnapped in his own plane and forced to land in Algeria on July 1. Held prisoner there, Tshombe was apparently being used by the Algerian government as a lever to influence Congolese policy, making it a condition of his extradition that Mobutu break the Congo's highly useful links with Israel and the United States.

In pursuit of national unity, Mobutu on April 7 announced a proposed new constitution to replace that of July 1964. The document, approved in a referendum in June, concentrates executive power in the presidency and abolishes the premiership and the senate. It provides for the possibility of two political parties. (No legal opposition exists at present.) However, rule by decree will continue until 1968, and the first presidential election is not envisaged until 1970. On April 28, Mobutu installed himself as the founder-president of the new government party, the Mouvement Populaire de la Révolution.

Nationalism in East Africa. The zealous nationalism of Mobutu in the Congo found a parallel in the actions of President Julius K. Nyerere of Tanzania. Nyerere's avowedly socialist regime embarked on a far-reaching series of economic measures designed to put socialism into practice. On February 4, Nyerere promulgated the Arusha Declaration, largely a theoretical celebration of the glories of socialism, and on February 11 he followed this up with the nationalization of a large number of firms, including most of the large-scale enterprises oper-

(*Continued on page 34*)

NON A
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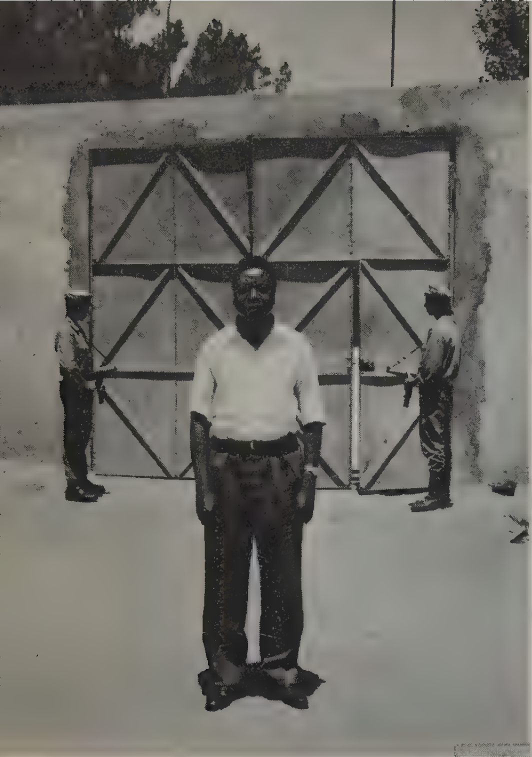
GAULE

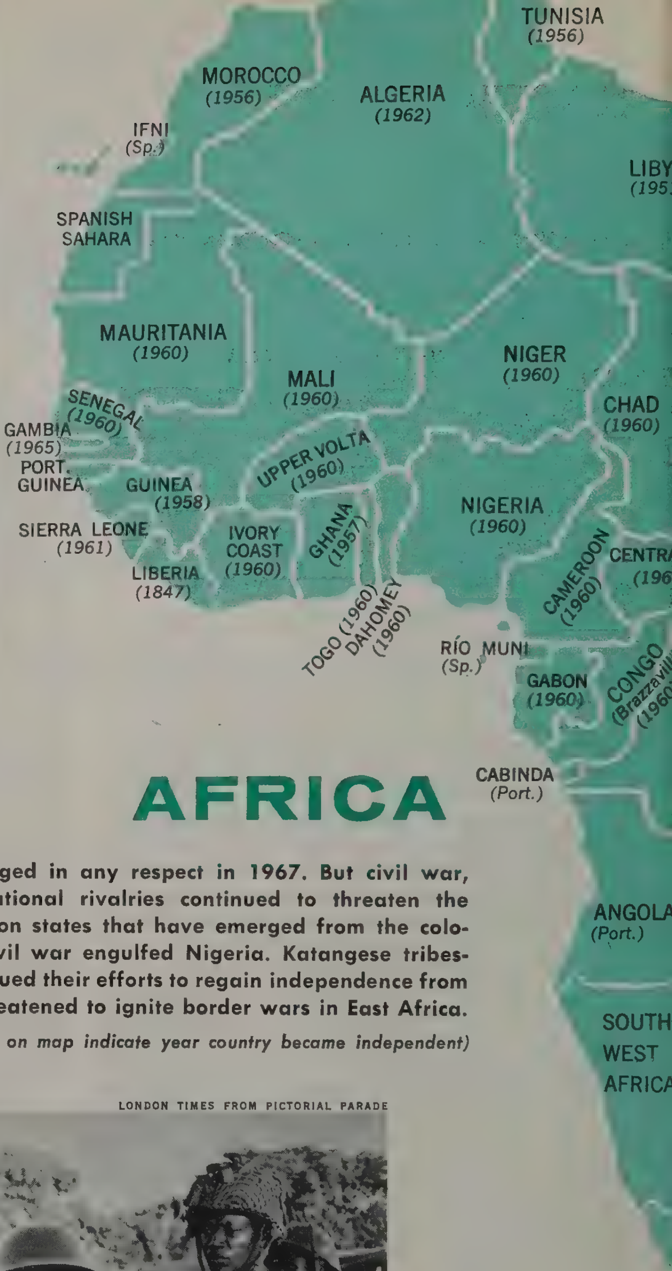
WIDE WORLD

SOMALIS PROTEST continued French rule of French Somaliland on March 19. This demonstration at Djibouti and others like it were directed specifically against President Charles de Gaulle, whose candidate won the election.



BLACK STAR

ALGERIA Ex-Premier Moise Tshombe of the Democratic Republic of Congo glowers at the camera after his abduction in his own airplane and internment in this prison outside Algiers.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AFRICA

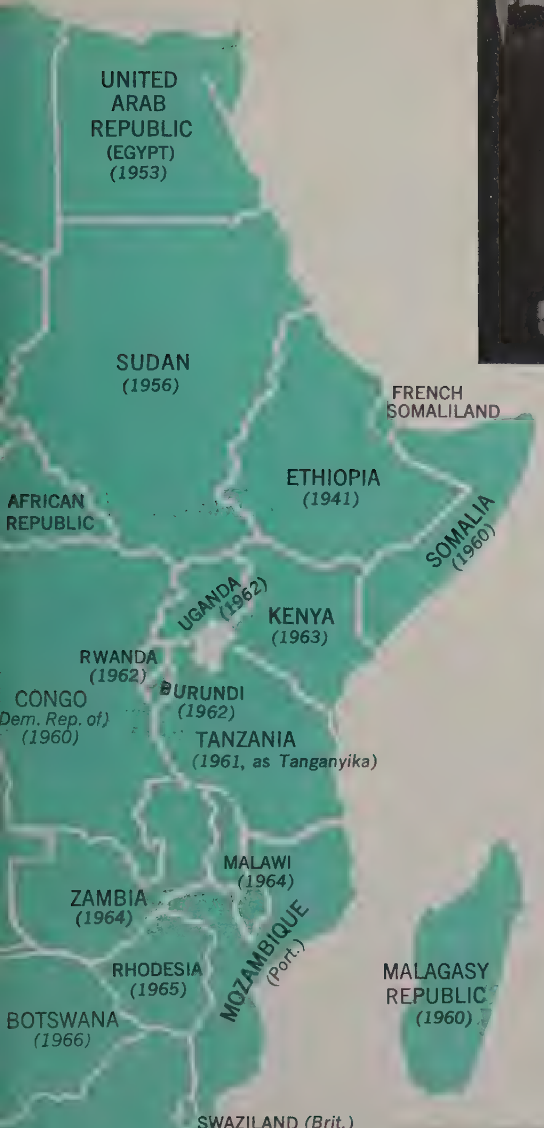
AFRICA

The political map of Africa was not changed in any respect in 1967. But civil war, regional and tribal insurgencies, and national rivalries continued to threaten the political stability of the Black African nation states that have emerged from the colonial arrangements of the 19th century. Civil war engulfed Nigeria. Katangese tribesmen, aided by European mercenaries, continued their efforts to regain independence from the Congo republic, and ethnic rivalries threatened to ignite border wars in East Africa.

(Dates on map indicate year country became independent)

LONDON TIMES FROM PICTORIAL PARADE

NIGERIA Captured weapons of the secessionist Eastern Region (Biafra) are examined by troops of the federal republic's army.


UNITED
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REPUBLIC
(EGYPT)
(1953)
SUDAN
(1956)
FRENCH
SOMALILAND
ETHIOPIA
(1941)
AFRICAN
REPUBLIC
SOMALIA
(1960)
UGANDA
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KENYA
(1963)
RWANDA
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BURUNDI
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CONGO
(Dem. Rep. of)
(1960)
TANZANIA
(1961, as Tanganyika)
MALAWI
(1964)
ZAMBIA
(1964)
MOZAMBIQUE
(Port.)
RHODESIA
(1965)
MALAGASY
REPUBLIC
(1960)
BOTSWANA
(1966)
SWAZILAND (Brit.)
SOUTH
AFRICA
(1910)
LESOTHO
(1966)

PARIS MATCH FROM PICTORIAL PARADE

SUDAN Arab summit conference, held at Khartoum in late August, revealed unusual cordiality among (*from left*) Jordan's Hussein, Egypt's Nasser, and Saudi Arabia's Faisal.

KEYSTONE

CONGO Pro-Tshombe Katangese troops assemble mortars and rocket launchers on the outskirts of Bukavu during a white mercenary-led campaign against government in July.

UPI

SOUTH AFRICA Visitors from Cape Town swarm aboard the carrier USS *Franklin D. Roosevelt* on February 5. U. S. government cancelled crew's shore leave and invited townspeople aboard in order to insure "integrated" activities for ship's integrated crew.

ating in Tanzania. The government also planned to acquire majority holdings in a large number of other companies. Compensation would be given for expropriated enterprises.

Nationalization was a doctrinaire step not likely to benefit Tanzania in any tangible way. Indeed, the reverse was true, as Nyerere found later in the year, when he expressed pained surprise at the curtailment of foreign investments.

A further manifestation of nationalism to be found both in Tanzania and in neighboring Kenya was the growing animosity toward the half million Asian residents of East Africa. Tireless and successful businessmen, virtual monopolists of the retail trade in many areas, the Asians are bitterly resented by the less skilled, less prosperous, and often unemployed Africans. Resentment is rapidly turning into pressure on the Asians to intermarry and assimilate or else leave Africa. Anti-Asian riots were common in the East African states in 1967.

Questions of Internal Stability. In the half dozen years since most of the African states became independent, internal instability has been a common problem, by no means confined to the sprawling and composite states such as the Congo or Nigeria. However, there was some improvement in this respect in 1967. Even if African states were typically still far from enjoying an assured stability, at least the rash of coups d'etat that had occurred since midsummer 1965 had eased off. This was no triumph for democracy; rather, it meant that the military regimes established in those various coups still were firmly entrenched.

Only in Sierra Leone was the familiar pattern of succession of civilian government by the military repeated in 1967. There, on March 22, Brigadier David Lansana, army commander in chief, took control and arrested both the governor-general and the premier he had just appointed. Lansana himself was replaced on March 23 in a junior officers' coup led by Maj. Charles Blake, who nominated Lt. Col. Ambrose P. Genda, then serving with the Sierra Leone UN mission, as chairman of a ruling military council. On March 27, Genda was replaced by Lt. Col. Juxon-Smith, reportedly to create a better tribal and regional balance in the national leadership.

In Togo, which essentially has been under military rule since the assassination of President Sylvanus Olympio on Jan. 13, 1963, the fourth anniversary of that event was marked by the peaceful ousting of the titular president, Nicolas Grunitzky. In his place Col. Étienne Eyadema assumed power, naming himself president on April 14, with a council of four senior army officers and eight civilians.

Boundary Disputes. Among the new states of Africa, frontier disputes are as common as they were among the states of 18th and 19th century Europe. One of the most dangerous situations is the controversy between Ethiopia and Somalia, which has territorial ambitions in the adjacent Ethiopian province. When a referendum was held in French Somaliland on March 19 offering a choice of independence or continued association with France, it appeared possible that a vote for independence might bring Ethiopia and Somalia into armed conflict over the future fate of the territory. However, the option of continued association with France won handily.

In the north, the 4-year-old boundary dispute between Morocco and Algeria grumbled on. Morocco, in January, claimed that Algerian forces had driven deep into Moroccan territory. Meanwhile, the discovery of rich phosphate deposits in Spanish Morocco seemed likely to set off a three-cornered struggle among Morocco, Algeria, and Mauritania for eventual control of these resources.

African International Organizations. The Organization of African Unity (OAU) did little of note in 1967. The 4-year-old bloc continued to have little motive for cohesion except its desire to end white supremacy in the southern tip of Africa. The meeting of the heads of state of the OAU held in Kinshasa, Congo, September 11–14, adopted a fairly sober policy with a restricted budget, and struggled with the problems in Nigeria and the Congo, but the main objective remained the "liberation" of Africa south of the Zambezi.

The prospects for achievement of the goals of the OAU are in all probability small beside the solid accomplishments and prospects of some African regional organizations, notably those linking the French-speaking states, such as the Organisation Commune Africaine et Malgache (OCAM) and the Conseil de l'Entente. Félix Houphouët-Boigny, president of the Ivory Coast and a champion of free enterprise, argued in an address at Montreal, Canada, on August 24, that the road to African unity lay by way of regional economic groupings and not larger, illusory unions. Several French-speaking African states are eager for closer cultural and economic links with France—a project for a "French-speaking commonwealth," which they call *francophonie*. France, while sympathetic, has been extremely cautious and is allowing the African proponents to develop the idea.

In June the presidents of Kenya, Tanzania, and Uganda signed a 15-year East African Cooperation Treaty to go into effect Dec. 1, 1967. The treaty establishes an East African Community and an East African Common Market. Other states may negotiate for association with the community.

Southern Africa. There was no substantial change in the political situation in the southern tip of Africa, and what change there was suggested a strengthening of white regimes rather than trends toward majority rule. The new prime minister of South Africa, Balthazar J. Vorster, proved to be an adroit and flexible policymaker. His pragmatic course scored a striking success in the trade agreement concluded with Malawi on March 13. Significantly, Malawi was the only member-state of OAU not represented at the Kinshasa meeting. South Africa also started active economic cooperation with the Portuguese African colonies and aided Rhodesia in repulsing "trouble makers" attempting to enter from Zambia. Vorster declared that his nation would not recognize the UN council set up in May to administer South West Africa. South Africa's mandate to this territory was terminated by the UN in 1966.

The white administration of Ian D. Smith in Rhodesia, which celebrated its second year of independence on Nov. 11, 1967, continued to upset the expectations of many prophets. The Rhodesian economy, though seriously hampered by UN economic sanctions (particularly in the tobacco sector), has been forced into diversification, which probably will prove to be beneficial in the long run. Prime Minister Smith received the overwhelming support of his party for his cautious, step-by-step policies.

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AGRICULTURE

AGRICULTURE

Developments in agriculture in 1967—record production, scientific advances, and expanded government services—are reviewed in this article under the following headings: (1) U. S. Agriculture in 1967; (2) Agricultural Research; and (3) Farm Services.

U. S. AGRICULTURE IN 1967

Production of both crops and livestock soared to record highs in the United States in 1967. Gross farm income and net cash income, however, declined from the high levels of 1966.

Gross income dipped to about $49.2 billion from the record of $49.7 billion in 1966. Mainly because production expenses rose to new highs, net cash income fell to about $14.8 billion, down from the near-record level of $16.4 billion in 1966. Nevertheless, net income was higher than for any year since 1952 except for 1966.

For the first time since 1959, net income per farm declined from the previous year. The 1967 average net income per farm was about $5,000, down only slightly, however, from the 1966 record high of $5,049. The continued decrease in the number of farms helped hold up the average income per farm despite the sharp dip in total net income.

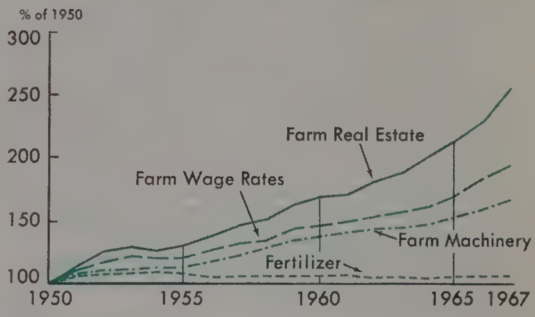
Farm Income and Prices. The decrease in net farm income occurred despite near-record direct government payments to farmers, and it stemmed mainly from substantial increases in production expenses. Lower farm prices were partly offset by an increased volume of farm marketing, especially of livestock products.

Direct government payments to farmers totaled about $3.1 billion, down from the 1966 record high of $3.3 billion. This dip, the first since 1963, was attributed to smaller payments to farmers for reducing feed-grain plantings under federal acreage-cutting and income-supplementing programs. Payments under similar programs for curbing cotton and wheat plantings were higher, but they were not high enough to offset the lower outlays for the feed-grain programs.

Average crop prices fell 5% below the 1966 level, but they were partly offset by an increase in volume of marketings. Prices for livestock and livestock products were down 6% from the previous year's averages, but the volume of livestock marketing was up 3.5%. Average prices received by farmers for all products were down 5.5% from the 1966 averages, yet the larger volume of marketings kept cash receipts only 1% below the 1966 totals.

The high level of farm marketing from 1966 production and the prospect of larger production in 1967 were quickly reflected by a decline in prices. Meat and poultry supplies were plentiful in the first six months of the year. Beef output was up 6% from the same period in 1966, while other increases were pork production, 15%; lamb and mutton, 2%; and poultry, 16%. The 6-month total was 21 billion pounds, 10% higher than in the same period of 1966.

HOW FARMERS' COSTS HAVE RISEN



Data from Economic Research Service, U.S. Department of Agriculture

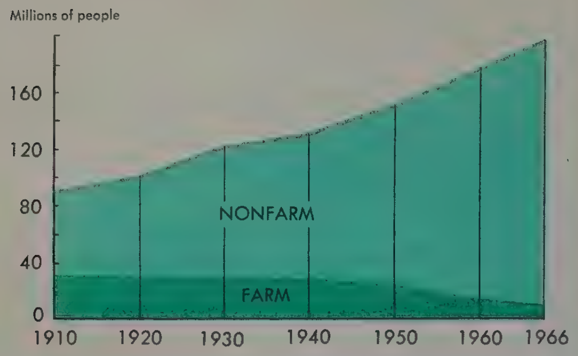
PHOTO BY GRANT HEILMAN

With supplies so plentiful, cattle prices in the first half of 1967 averaged $21.91 per 100 pounds, almost 4% below a year earlier. And hog prices plummeted 21% to an average of $19.22 per 100 pounds. Egg prices averaged 32 cents a dozen, down 5 cents from the average for the first six months of 1966. Broiler prices averaged 14 cents a pound, down 2.4 cents from a year earlier. Turkey prices averaged 20.5 cents a pound, down more than 3 cents from a year earlier.

In the second half of 1967, meat supplies were more in line with demand, and prices improved somewhat. Milk was an exception to these trends—output in the first half declined slightly, and wholesale milk prices reached a record high at around $5.00 per 100 pounds, nearly 10% above the previous record in 1966.

A sharp drop in cash receipts from cotton marketing, stemming from steep declines in output, played a major part in reducing income from crop marketing. The production cutback resulted from government restraints on planting and from income-boosting payments to growers aimed at reducing a cotton surplus standing at a record high. The lower

THE DWINDLING FARM POPULATION



Data from Bureau of the Census and Economic Research Service

cotton receipts were offset by larger marketings of corn, wheat, and soybeans.

Production expenses climbed to more than $34.4 billion, up from the previous high of $33.3 billion in 1966. Feed costs were up 6% from 1966. Prices for motor vehicles and farm machinery rose as much as 4%. Purchases of fertilizer were larger in volume. Interest and taxes payable per acre rose well above those of 1966. Farm wage rates were up 7%, but the number of hired hands was down about 8%. The only major farm input lower in price in 1967 than a year earlier was feeder and replacement livestock, down about 5%.

Food Production. The U. S. all-crop production index (1957–59=100) rose to a record high 116 in 1967, up from 112 in the previous year, and one point above the previous high in 1965. The per-acre yield for 28 major crops was placed at an index figure of 123, up from 122 in 1966, but 1 point below the record of 124 in 1965. Record crops were harvested in wheat, feed grains, soybeans, rice, peanuts, and sugarcane.

Supplies of fresh vegetables and eight principal vegetables for processing were up 11% above 1966 stocks. The citrus crop, heavily damaged by hurricanes, was 28% below the previous year's record output. The tonnage of noncitrus fruits was down 14%. Potato output was down about 2%.

Crops planted for the 1967 harvest totaled 316 million acres, up 6% (18.8 million acres) from a year earlier and the largest in seven years. The increase in acreage, mainly for grain crops, plus near-record per-acre yields, account for the record crop output. The government eased planting restrictions on grains to make certain of adequate supplies. In the mid-1960's, high consumption at home and abroad and federal crop-production controls have sharply reduced the once troublesome wheat and feed-grain surpluses.

An estimated total of more than 4.7 billion bushels of corn flowed into the markets—nearly 15% greater than the previous high in 1966. Corn output, together with that of the three other feed grains—sorghum, barley, and oats—swelled feed-grain production to a record 175.1 million tons, up 11% from 1966's near-record total. The previous high production was the 157.4 million tons achieved in 1965.

Wheat output totaled a record of more than 1.5 billion bushels, up from 1.3 billion bushels in 1966 and 67 million bushels more than the previous high in 1958. The huge crop more than made up for depleted reserve stocks, which had fallen to their lowest levels since 1952. It resulted in the first increase in total U. S. supplies of wheat since 1960.

Soybean production also attained a record high at 973 million bushels, 5% more than the previous high a year earlier. Average soybean prices received by farmers declined for the first time since 1959. The decline, however, began from a record high $2.77 a bushel.

Rice output at 89.6 million hundredweight was up 5% from the previous high in 1966. Peanut production at 2.5 billion pounds was up 4% from the previous record a year earlier. Sugarcane tonnage totaled 25.2 million, up 7% from 1966 and 4% more than the previous high in 1964.

Meat and poultry production rose to about 43 billion pounds in 1967, up from 41.5 billion pounds in 1966. Milk marketed totaled about 119.6 billion pounds, slightly less than in 1966 and down from the record 127 billion pounds in 1964. Meat and poultry production expanded in response to an extended period of favorable prices.

Food Consumption. The average American ate about 1% more in 1967 than a year earlier. The per capita food consumption index (1957–59=100) rose to 103.5, matching the record set in 1946. Increased supplies, growing population, and strong consumer demand accounted for the gain.

Meat and poultry consumption per person rose to 223.4 pounds in 1967 from 214.3 pounds in the previous year. The average American ate a record of about 105 pounds of beef, up from the previous high of 104 pounds in 1966. Pork consumption increased to 61.5 pounds, up from 58 pounds in 1966. But the consumption of veal, lamb, and mutton declined slightly. During 1967 the average consumer ate nine more eggs than in 1966.

Americans ate the same amount of fish per person as in 1966. They consumed more fruit and vegetables but smaller quantities of dairy products, except cheese. Chicken consumption rose to 37.5 pounds from 36 pounds in 1966, and turkey to 8.6 pounds from 7.8 pounds.

Agricultural Employment. The index of farm wage rates (1957–59=100) rose to a new high of about 147 in 1967, up from 136 in the previous year. Wages averaged $1.11 an hour in 1967, up about 8 cents—or about 8%—in a year. The farm work force declined about 5% from 5,214,000 in 1966. Thus the decline in numbers of hired hands virtually offset the higher cost from increased hourly pay.

Farm Assets and Land Values. The market value of farm real estate on Jan. 1, 1968, totaled an estimated $191.5 billion, up $9.5 billion (5.2%) from a year earlier. The value of agricultural assets, including crop and livestock inventories, was estimated at $281.2 billion on Jan. 1, 1968, up $11.7 billion in a year. Liabilities against those assets, including debt on real estate and loans from other creditors, were estimated at $49.9 billion, leaving a balance of $231.3 billion in agricultural equities (up $7.5 billion).

Agricultural Exports. For the fiscal year ending June 30, 1967, exports of U. S. farm commodities rose to a record high of $6.8 billion, up from the previous record of $6.7 billion in the preceding 12 months. Volumes of farm exports were mostly down, but higher prices for soybeans, wheat, and feed grains helped push the total value of exports to the record high.

The increase came from commercial sales, which attained a record of $5.2 billion, up from $5.1 billion, the previous high, in fiscal 1966. Sales under special programs entirely financed by the government, including donations to some nations, accounted for the rest of the exports.

Wholesome Meat Act. The year's most important new law affecting U. S. agriculture, the Wholesome Meat Act, strengthened existing federal interstate inspection regulations and established a program of federal-state cooperation aimed at bolstering intrastate meat inspection. It was signed by President Johnson on Dec. 15, 1967. The core of the law provides that state governments must upgrade their meat inspection programs within two years or face federal regulation of meat processing plants. The act authorizes grants to the states of up to 50% of the cost of making their inspection systems "consistent with" federal programs.

The new law defines "adulterated" or "misbranded" meat in line with definitions used by the Food and Drug Administration. The act makes mandatory the inspection of animals before slaughter as well as afterward.

In addition, the secretary of agriculture is authorized to draw up regulations for both storage and handling of meat in interstate commerce. Meat not intended for human consumption must now be denatured before being sold. Processors and packers of dead, dying, disabled, or diseased animals are required to sell such meat only under federal restrictions set by the secretary.

Food Stamp Program. Congress approved a two-year extension of the expanding Food Stamp Program and appropriated $185 million to operate it in the fiscal year that began July 1, 1967. The program, begun in 1961, is aimed at helping farmers expand markets indirectly by providing low-income families with more food-purchasing power. This is done by issuing coupons to eligible families at a discount.

Although the amount varies according to family income and family size, average recipients pay $6 for $10 worth of coupons. The coupons are accepted as cash for most foods at grocery stores. The Treasury Department redeems the coupons through the banking system.

Food for India. Early in 1967, Congress voted specific approval of President Johnson's request for emergency food aid to famine-threatened India. (In advance of the vote, the President already had the needed authority.) The legislation approved U. S. participation in cooperation with other countries and international organizations in efforts to help India achieve self-sufficiency in food. The U. S. share of emergency aid was as much as 3 million tons of grain if others matched this amount. Congress agreed to an outlay of as much as $190 million to cover costs of the grain and an additional $25 million in direct food assistance through American voluntary agencies.

JOE WESTERN
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AGRICULTURAL RESEARCH

The Agricultural Research Service (ARS), an agency of the U. S. Department of Agriculture, conducts research in farming, human nutrition, consumer and food economics, marketing, and new uses for agricultural products. The agency also carries on regulatory activities to control pests that afflict livestock and plants, to prevent the entry of animal and plant pests into the United States, and to assure that pesticides meet acceptable standards of safety and effectiveness. Much of this work is done in cooperation with state agricultural experiment stations.

Food Processing and Packaging. Marketing specialists continued to find ways to get products to consumers in better condition. They developed a radically new machine, called the unitized brush-sizer, which nestles apples between two soft brushes during sorting, brushing, and sizing, for maximum protection from bruising. They also found that packaging pears at the shipping point in specially designed trays of molded pulp reduces bruising while providing an attractive display package.

A tasteless, odorless fat from cottonseed oil may lead to major changes in the packaging of nuts, meats, and produce. Sprayed on the product in a very thin film, it locks out oxygen and retards rancidity for long periods, eliminating the need for canning or other costly packaging. Packaging treated nutmeats in bags costs about 15 to 20 cents per case; canning costs about 95 cents per case.

Refrigerated fresh apple slices will keep their natural flavor, color, and crispness up to six weeks when treated by a new method developed by ARS researchers. With present methods, apple slices stored at temperatures above freezing will keep for about a week before turning brown. The new process should help food service operators improve their services.

Tomatoes can be processed to the desired consistency—thin juice or firm gel, and almost any consistency in between—by adjusting the acidity when the tomatoes are crushed, scientists found. Crushing activates certain enzymes that break down the pectins that control consistency. The activity of the enzymes may be controlled by addition of the proper amount of acid.

Diet Research. Restricted diets high in fat and low in carbohydrates are no more effective for reducing true body weight than restricted diets low in fat, studies with rats showed. Rats on high-fat restricted diets apparently weighed less than those on low-fat diets, but this was because they carried lighter loads in their digestive systems. Otherwise the weight of rats was no different whether the diet was high or low in fat; but with a high-fat diet the proportion of fat in the body was generally greater. Future research will show whether the findings can be applied to humans.

Plant Research. ARS has established a new Plant Air Pollution Laboratory at Beltsville, Md., to study how best to combat the growing problem of air pollution, which damages some plants. Basic research in the laboratory will be directed toward a better understanding of how air pollutants act on agronomic, horticultural, and ornamental plants, and toward developing methods for controlling damage to plants.

Plant explorers continued to search for exotic plants capable of providing new crop and ornamental species that will grow in the United States. A recent trip to South Korea turned up a new lily, a yellow-flowered Weigela, a red-fruited spicebush, and a pine with edible, nutlike seeds.

Plant breeders have developed a hybrid buffel grass, a Southern pasture grass; a cantaloupe line that resists virus; soybeans with more protein; an oat variety that matures earlier than any other variety grown in the United States; and a new lima bean, which resists downy mildew.

Plant Research. Researchers studying rust diseases

AGRICULTURAL RESEARCH SERVICE, U. S. DEPARTMENT OF AGRICULTURE

CATTLE TESTING helps to reduce brucellosis. These cows are tagged for blood tests during slaughtering process.

of cereal crops have developed a sampling instrument, mounted in a small airplane, that continuously records populations of rust-causing fungus spores over long distances. They have determined accurately the degree of rust infection in specific areas by counting the spores they trapped high above the fields. In the future the instrument may be used to learn more about the nature of rust spores—how they survive in the atmosphere and how they move for long distances from infected areas to other grain-growing areas.

Livestock and Poultry Research. A test capable of detecting trace amounts of foot-and-mouth disease virus has been developed. It may prove valuable in preliminary safety testing of certain foot-and-mouth disease vaccines in countries where vaccination is used to protect livestock from the costly disease. It may also be used to screen animal products to make sure they are free of viruses. The test can find live virus in very small amounts in the blood, organs, or tissues of some animals.

Dairy cattle scientists have taken the first step toward developing a chromosome "map"—a tool that will help researchers and farmers do a better job of selecting breeding stock. They have discovered the location and relationship of four of the many genes that make up this map for dairy cattle.

Scientists have developed a fertile chicken-quail hybrid that could help geneticists learn how to transfer desirable characteristics—such as disease resistance—from wild birds to domestic poultry.

Insect Research. Scientists have identified the substance in the wood of balsam fir that prevents insects from developing into adults. The substance, a hormonelike compound called juvabione, causes insects to develop into overgrown nymphs that perish instead of developing into virile adults. If the substance can be synthesized inexpensively, it may be a safe and effective method of insect control.

ARS scientists are searching the world for insects that eat weeds without harming crops. A promising one is the *Altica* beetle native to Europe. It may help to control the Canada thistle, a pest in large parts of the United States, especially the North.

Housing for Migrants. Researchers have developed design guides for economical housing for migrant farm workers. Buildings are easy to maintain and have space and facilities for clean, healthful living. Studies by the Agricultural Research Service show that farmers save by providing good housing because it usually attracts better workers.

Animal Disease Control. ARS and the states carry on programs against animal diseases. The programs showed the following results by mid-1967:

(1) The number of hog cholera outbreaks rose 18% in 1966, with 689 confirmed outbreaks reported. There had been 583 outbreaks in 1965, 1,110 in 1964, and 1,118 in 1963. All states are actively participating in the campaign to eradicate hog cholera, and 29 of them—containing 62% of the nation's hogs—have progressed to the final phases of the eradication program.

(2) More than 91% of U. S. counties had reduced the incidence of brucellosis in cattle to less than 1%. The disease had been eradicated from 873 counties in 32 states, the Virgin Islands, and Puerto Rico. Certified brucellosis-free status was achieved by Connecticut, Maine, Massachusetts, New Hampshire, Nevada, Rhode Island, Utah, Vermont, Wisconsin, Washington, and the Virgin Islands.

(3) Efforts to eradicate brucellosis from swine continued, and validated brucellosis-free herds totaled more than 2,300 in 1967. There were 131 brucellosis-free counties (including all of Vermont, Utah, Nevada, and the Virgin Islands), compared with 123 in 1966.

(4) In the campaign to eradicate cattle tuberculosis, 608 counties in 23 states, Puerto Rico, and the Virgin Islands were accredited free of bovine tuberculosis. All counties in Maine, New Hampshire, and the Virgin Islands have this status.

Animal and Plant Inspection. Under laws protecting U. S. livestock from foreign diseases and other pests, 1,349,314 foreign animals were inspected and allowed to enter the U. S. in the fiscal year 1966. A total of 43,952 animals were rejected.

Plant quarantine inspectors intercepted 41,015 diseases, insects, and other plant pests and found 587,530 lots of prohibited plant material. In their efforts to keep out foreign plant pests, they inspected more than 34 million ships, planes, and automobiles, and more than 48 million pieces of baggage.

Robert B. Rathbone
U. S. Agricultural Research Service

FARM SERVICES

Agencies assigned by the U. S. Department of Agriculture to provide loans, credit, and crop insurance to rural Americans established records in their activities in 1967. The Farmers Home Administration (FHA) lent nearly $1.4 billion, more than ever before. The Federal Crop Insurance Corporation wrote $775 million worth of insurance—a record high—on farm crops produced on 18 million acres. The Farm Credit System lent a record $8.3 billion to farmers, ranchers, and cooperatives. The Rural Electrification Administration (REA) continued to extend electric and telephone service.

Farmers Home Administration. In the fiscal year 1967 the FHA, which supplements credit from private sources, benefited an estimated 3.2 million persons through its activities. Loans made and insured by the FHA totaled a record of almost $1.4

billion, compared with $1 billion the previous year.

Loans and grants for the construction of modern urban-style water distribution systems and waste disposal systems amounted to more than $197 million for 1,112 projects in 48 states, compared with $134 million for 800 projects in 12 states in 1966. This expanding program, totaling $440 million since it was begun in 1961, has brought running water or sewage disposal facilities to more than 2.2 million persons in rural areas. About 65% of the total was in FHA-insured loans from private investors.

Rural development efforts by the agency included the lending of $28 million for 211 community recreation facilities and $1,167,000 for pilot rural-renewal projects. The FHA also made over $28 million in economic opportunity loans to 16,453 low-income rural families and 382 cooperatives serving low-income people.

The oldest FHA program—family farm loans—provided more than $560 million in credit to 78,933 families. Farm-operating loans accounted for $300 million of the total, and farm ownership loans to 14,000 families made up the rest.

The agency also extended $94.6 million in emergency operating credit to farmers in areas hit by floods, drought, and other disasters. This amount brought to more than $1 billion the total lent under this program in 18 years.

Rural-housing loans for construction and remodeling were granted to 48,573 families and rural groups in 1967. The total of $442.1 million advanced for housing included $10.1 million for rural housing for the elderly and $6.5 million for rental housing for farm workers.

Loans outstanding at the end of the fiscal year 1967 totaled nearly $4.9 billion, compared with $3.2 billion in 1966. Principal and interest repayments of $657 million in 1967 were the largest in FHA history. The total lent under FHA auspices during its 32 years of operation amounted to $10.7 billion.

Farm Credit System. The Farm Credit System is made up of 12 federal banks and 695 affiliated federal land bank associations, 12 federal intermediate credit banks and 463 affiliated production credit associations, and 13 banks for cooperatives. These federally chartered lending institutions are supervised by the Farm Credit Administration, an independent agency of the U. S. government.

Funds lent to farmers and their cooperatives are raised by selling bonds and debentures on the open market. All expenses of the Farm Credit Administration are paid by the banks and the associations of the system.

The Farm Credit System had $10.4 billion in loans outstanding at the end of fiscal 1967. This was an increase of $1.3 billion, or 14%, over 1966. Farmers and their cooperatives borrowed a record $8.3 billion from the system during the year, 8% more than the $7.7 billion borrowed the previous year.

The federal land bank associations provided $1.2 billion in long-term mortgage loans for 46,000 farmers during fiscal 1967, more than in any other year except 1966, when 60,000 farmers borrowed $1.4 billion. At the end of the fiscal year, 381,000 farmers had $5.3 billion in loans outstanding.

Production credit associations made $5.1 billion in short- and intermediate-term loans in fiscal 1967. This was 13% more than the $4.5 billion lent the previous year.

Banks for cooperatives lent $1.7 billion to 2,474 farmer cooperatives during the year. By the end of fiscal 1967, 3,016 cooperatives had $1.3 billion in loans outstanding, an increase of 12% over the total on June 30, 1966.

Federal Crop Insurance Corporation. This corporation paid an estimated $42 million in 1967 to compensate some 74,000 farmers whose crops did not return production costs because of drought, freeze, storms, insects, plant diseases, and other unavoidable natural causes of crop loss.

The corporation's $775 million worth of insurance on crop-production investments in 1967 represented a large increase over the $640 million in 1966. The 1967 insurance covered crop investments on 18 million acres, up 2 million from a year earlier. Insurance coverage protected farmers in 1,363 counties in 38 states.

With the addition of sugarcane and grapes in 1967, the corporation wrote policies on 25 types of crops, including corn, wheat, cotton, and soybeans. Citrus fruits, raisins, peaches, apples, grapes, and some other specialty crops are insured only against such hazards as freezing and wind damage. A new development is the increasing use of federal crop insurance policies by farmers as loan collateral.

Rural Electrification Administration. More than 240,000 rural people will be added to the lines of electric and telephone systems financed by REA as a result of loans approved in the fiscal year 1967.

REA approved 259 electric loans during the year to bring central station electric service to 156,981 rural consumers for the first time. The loans totaled $352.4 million, bringing the cumulative amount of loans made in the 32-year-old program to almost $6.3 billion.

By the end of fiscal 1967, REA-financed rural electric systems had made principal and interest payments of $2.7 billion on the $5.3 billion in loan funds advanced to them for investment in their local electric facilities.

REA's nearly 1,000 active electric borrowers serve 5.8 million meters, or some 20 million persons, and more than half of the nation's 3.3 million electrified farms. They provide service in 2,610 of the 3,092 counties in the United States. REA-financed rural electric systems operate in 46 states.

Retail electric power rates were reduced by 92 electric borrowers during the year for annual savings to their consumers of $1.9 million. Usage per capita reached a new high of 708 kilowatt-hours per month in fiscal 1967, an increase of 242 kw-hr per consumer over the fiscal 1960 average.

REA approved 188 telephone loans during fiscal 1967 to bring new and improved all-dial telephone service to 83,590 subscribers. The loans totaled $119 million, raising the cumulative total of loans made in this 17-year-old program to almost $1.4 billion. By the end of fiscal 1967, REA-financed telephone systems had made principal and interest payments of $276.4 million on the $1.1 billion of loan funds advanced to them for investment in their local telephone facilities.

The 867 rural telephone systems—636 commercial companies and 231 cooperative associations—serve nearly 2 million rural subscribers in 1,872 counties in 46 states.

In fiscal 1967, the REA-financed systems continued an accelerated program of upgrading service toward their long-range goal of all-dial, single-party service.

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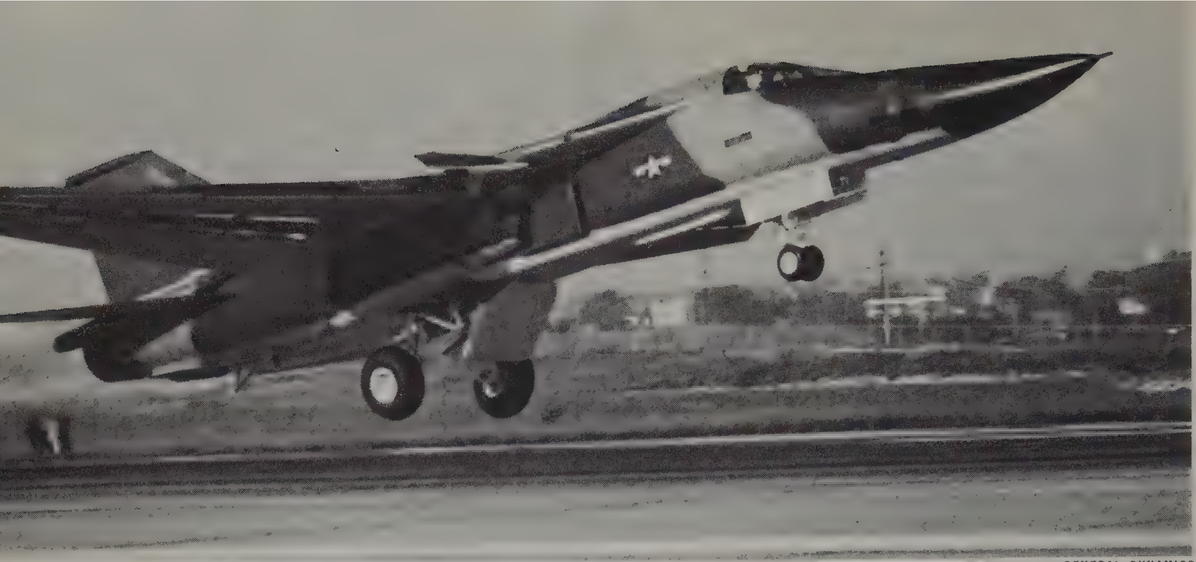


GENERAL DYNAMICS

NEW AIR FORCE TACTICAL FIGHTER, the variable-sweep-wing F-111A built by General Dynamics, became operational in an improved version in late 1967.

AIR FORCE

The U. S. Air Force in 1967 continued to prosecute the war in Vietnam, with tactical fighter-bombers regularly pounding targets in North Vietnam and flying mainly close-support missions in the South.

At the same time the Air Force also maintained its air defense and strategic forces in a high state of readiness, both in the United States and in Europe. On Sept. 18, 1967, the Air Force marked its 20th anniversary as a separate service.

Vietnam Operations. By June 18, 1967, two years after beginning their heavy bombing assaults, B-52's had flown more than 1,000 missions (over 10,000 individual flights) and dropped more than 190,000 tons of bombs. Prisoners of war attested to the morale-shattering effectiveness of the strikes. B-52's were operating against suspected Communist hideouts in South Vietnam, and even performed some close-support missions.

Close air support in South Vietnam and interdiction missions in North Vietnam were flown in the F-4C Phantom, F-100 Supersabre, F-5 "Skoshi Tiger," F-104 Starfighter, and F-105 Thunderchief. Two A-1E squadrons were also flying close-support missions in South Vietnam. KC-135 flying tankers were refueling many of the fighter-bombers.

Aerial reconnaissance over North Vietnam was performed in the RF-4C, equipped for both day and night photography, and the RF-101. Meanwhile, 0-1 observation aircraft were flown on visual reconnaissance and airborne forward air control missions in South Vietnam. A number of C-47's, dubbed "Puff, the Magic Dragon," and armed with 7.62-mm miniguns, were helping to defend outposts, escort convoys, and supplement strike aircraft.

Other C-47's and Helio U-10 short-takoff aircraft were flying psychological warfare missions—dropping leaflets and broadcasting messages to the Communists. C-47 and C-123 flare ships were illuminating battlefields at night. Modified C-123's, converted to sprayer aircraft, were defoliating dense jungle growth to hamper Communist supply movements. Air-sea rescue planes, both helicopters and fixed wing types, were plucking downed pilots from land and sea, often under enemy fire.

Logistic aircraft were resupplying not only U. S. and South Vietnamese forces but also Vietnamese civilians. The C-123, the C-130, and the Canadian-built C-7A Caribou (transferred from the Army to the Air Force early in 1967) were flying in-country missions, while the C-141, C-124, and C-133 were carrying supplies from the United States. Civilian carriers ferried most of the personnel and a third of the military cargo to Southeast Asia.

A special feature of the airlift effort was the Red Ball Express. Begun on Dec. 8, 1965, it was delivering an average of 30 tons a day of priority equipment to the U.S. Army in South Vietnam—a 10,000-mile (16,040-km) trip—in 168 hours or less from the time it was requested by the Army unit in the field.

Air Force special warfare forces in 1967 were particularly helpful in supporting the pacification program by transporting nonmilitary cargo to remote areas. They were also working with the South Vietnamese in building schools, improving sanitation facilities, constructing small dams and bridges, and establishing cottage industries. Air Force medical men immunized or treated thousands of people.

Both air combat and air logistic support for the effort in Southeast Asia in 1967 rested on 10 major air bases in South Vietnam and 8 in Thailand, as well as dozens of smaller airfields in both countries. (See also VIETNAM WAR.)

Research and Development. Efforts in 1967 were being directed primarily toward better aircraft, missiles, munitions, and electronic, reconnaissance, and countermeasure devices. New high-strength materials, high-temperature alloys, laminar-flow control, and engine designs could reduce aircraft weight by 25% to 40% and revolutionize design.

In space research, about 67% of all launches in the national space effort since the program began have been provided by USAF boosters and crews. The Eastern and Western test ranges, located at Patrick AFB, Va., and Vandenberg AFB, Calif., respectively —as well as many more specialized facilities—were being operated by the Air Force. About 95% of the tracking and control of space vehicles in orbit—about 1,200 man-made objects in 1967—was being done by 10 USAF facilities located around the world.

NORTH VIETNAM
HANOI

WIDE WORLD

AIR FORCE COL. ROBIN OLDS achieved a record by downing four MIG's in the air war over North Vietnam.

Space programs made up three fourths of the Air Force's advanced development effort in 1967. Among the projects under way was the Manned Orbiting Laboratory (MOL), consisting of a Titan IIIM space booster, a Gemini B spacecraft, a laboratory vehicle, and supporting equipment. Objectives of the MOL are to determine in detail the capabilities of man in space, and to test and develop improved equipment and technology. Contractors for the MOL are working toward a first manned flight in 1969 or 1970.

Work continued on Defense Satellite Communications programs. The initial system was completed by a multiple Titan IIIC launch on June 28, 1967, but some of the satellites, up since June 1966, were to be replaced in 1968. A Tactical Satellite Communications program (TACSATCOM) was being developed for land, sea, and air forces in the field.

The Air Force was also working on lifting-body configurations in the START (Spacecraft Technology and Advanced Reentry Tests) program. This could lead to a maneuverable reentry system, replacing the present ballistic type of return from space. See also SPACE EXPLORATION.

Strategic Air Command. SAC forces in 1967 included the B-52 Stratofortress and B-58 Hustler bombers and the SR-71 and RC-135 reconnaissance aircraft. Early models of the B-52, as well as the B-58 force, were to be replaced by the FB-111, a bomber version of the F-111 tactical fighter, in the early 1970's. Armed with short-range attack missiles (SRAM), the FB-111 was expected to penetrate enemy defenses at low altitudes.

Missiles in the strategic inventory in 1967 included the Minuteman I and II and the Titan II. The last, no longer in production, was to be phased out gradually. The first Minuteman II missile wing became operational in 1966, and the Air Force was moving toward an ultimate strength of 1,000 Minuteman II and III missiles, with Minuteman I phased out by 1972. The Minuteman III was to have greater range, accuracy, survivability, and payload

THE FIRST BOMBS FALL on Phucyen airfield, a North Vietnamese MIG base, in October 1967.

U. S. AIR FORCE

capacity, allowing it to carry more penetration aids to counter an antiballistic missile defense.

The strategic forces in 1967 remained in a high state of readiness, with a percentage of the bombers on 15-minute ground alert and others airborne at all times. Missiles were on continuous alert in hardened sites. (See also MISSILES.)

Air Defense Command. ADC in 1967 was providing about 70% of the personnel and facilities for aerospace defense of the North American continent. Fighter aircraft included the F-101B Voodoo, F-102 Delta Dagger, F-104 Starfighter, and F-106 Delta Dart interceptors. (Bomarc B surface-to-air interceptor missiles were also on station.) The supersonic jet fighters were armed with air-to-air rockets, including the Falcon, the nuclear-tipped Genie, and the Sidewinder with its heat-seeking guidance system and nonnuclear explosive.

The $124 million underground Combat Operations Center in Cheyenne Mountain, near Colorado Springs, Colo., has directed these aerospace defense forces since April 1966. The center is a complex of steel buildings mounted on shock-absorbing springs and protected by 1,200 to 1,750 feet of granite.

Fourteen Back-Up Interceptor Control (BUIC) II sites were completed by late 1967, and work was under way on 19 enlarged BUIC III stations. BUIC, a high-speed surveillance-and-control system using electronic computers, is a standby monitor system that automatically takes over air defense tasks if the primary Semi-Automatic Ground Environment (SAGE) system becomes inoperative.

The Ballistic Missile Early Warning System (BMEWS) was fully operational, assuring up to 15 minutes' warning of a ballistic missile attack across the North American approaches. Over-the-horizon radar and systems to warn against sea-launched ballistic missiles improved U. S. detection ability.

Tactical Air Command. TAC strength was up to 23 wings in 1967, with over 1,600 aircraft, including the F-100 Supersabre, F-105 Thunderchief, and F-4C/D Phantom II. The number of F-4 aircraft—the newest, fastest, and highest-flying operational fighter in the inventory—was scheduled to reach about 1,000. The F-111A was expected to enter the inventory in quantity in 1968, and the A-7 in 1969.

TAC also operates the Special Air Warfare Center at Hurlburt Field, Eglin AFB, Fla., where pilots and support personnel learn guerrilla warfare techniques. A combat applications group at the center develops new methods and weapons to combat guerrillas. The Tactical Fighter Weapons Center, established at Nellis AFB, Nev., in September 1966, identifies problem areas and develops new combat equipment and techniques for fighters. Special air warfare units are sent to many non-Communist nations to train their air forces in counterinsurgency operations.

Among training exercises were One Shot 1-67 and 2-67, with simulated fighter attacks and airdrop of heavy equipment, weapons, and 600 paratroops. Clove Hitch III, in the Caribbean, used 21,000 men of all services in an amphibious-airborne test.

Military Airlift Command. MAC had more than 1,700 aircraft assigned to both active and Reserve airlift units in 1967. The inventory included the C-130 Hercules, C-133 Cargomaster, C-124 Globemaster, C-135 Stratolifter, and C-141 Starlifter. The latest to enter the inventory, the C-141, could deliver 60,000 pounds (27,200 kg) of cargo a distance of 4,000 miles (6,400 km) or 30,000 pounds (13,600 kg) a distance of 5,800 miles (9,300 km) at a nonstop speed of 500 mph (800 km/hr).

MAC's airlift capacity more than doubled from 1961 to 1967 and was expected to double again by 1970. The C-5A, due to become operational in 1972, is expected to revolutionize U. S. airlift capabilities. Despite its size (243 feet, or 74 meters, long, with a wingspan of 223 feet, or 68 meters) and load-carrying capacity (265,000 pounds, or 119,200 kg over a 3,100-mile, or 5,000-km, range), the C-5A will use only half the runway length required for present-day jetliners. It also will be able to operate on sod fields, and is designed to carry entire combat units to any point on the globe in 24 hours.

Strength. More than 1.5 million persons were directly involved in 1967 in the Air Force's more than 200 installations in the United States and 24 other countries. Military personnel rose to over 897,000 during the 1967 fiscal year, including about 135,000 officers and over 762,000 airmen. Approximately 285,000 men were serving overseas. Air Force Reserve strength (Ready Reserve) on June 30, 1967, was about 204,000, and Air National Guard was about 84,000. About 355,000 civilians were working for the Air Force, including those directly hired and those working for contractors.

The budget for fiscal 1968, signed on Sept. 30, 1967, provided $23.9 billion for the Air Force. Of this, $989.1 million was to purchase F-111A aircraft, and $47 million for research and development of the AMSA (advanced manned strategic aircraft). (See also AVIATION; NATIONAL DEFENSE.)

HARRY M. ZUBKOFF
Office of the Secretary of the Air Force

AIRCRAFT AND AIRLINES. See AVIATION.

U. S. AIR FORCE

PROPAGANDA LEAFLETS stream from an Air Force O-2 Super Skymaster, first used for psychological warfare in Vietnam in summer of 1967.

ALABAMA

The first woman governor of Alabama and the third woman governor in the history of the United States, Lurleen Burns Wallace, was inaugurated on Jan. 16, 1967. The wife of former Gov. George C. Wallace, she pledged in her inaugural address to carry on her husband's policies.

Legislature. The legislature met on March 2 in a special session on roads and highways. The session, which lasted through May 2, passed a $160 million road bond measure, effected a division of gasoline tax money more favorable to urban areas, and passed the first state aid program for municipal streets.

Governor Wallace urged the legislature, convening in regular session on May 2, to "give continuing priority to the investigation of federal court decisions on integration." The regular session, which finally adjourned on August 31, enacted a $562 million, 2-year appropriation for public education and a $121 million appropriation for other state agencies. Other legislation passed during the session included bills on mental health, parks, and property assessments; an antiriot measure; a 5% pay raise for state employees; a legislative pay raise, and a law that would have given parents the right to choose the race of their children's teachers. The last measure, which had been called by the Governor "the most important proposal which you have been called upon to consider this session," was subsequently struck down by the federal courts. Also thrown out was a tuition grant law, despite the Governor's declaration on September 8 that she would withhold state appropriations to Tuskegee Institute, a predominantly Negro college, unless this legislation were upheld.

Education. On March 22, a 3-judge federal court in Montgomery handed down a far-reaching decree ordering Governor Wallace and state educational officials to "take affirmative action" toward integration of the state's public school systems. The court noted that the "defendant state officials have engaged in a wide range of activities to maintain segregated public education." The court, which also declared unconstitutional a 1965 state tuition grant law for private schools, called for state officials to notify city and county school systems that they must submit and adopt desegregation plans for all grades beginning in September 1967.

On March 30, before a statewide television audience, Governor Wallace affirmed her resistance to the school order, promising to do what she could "to prevent the destruction of our public school system." Two weeks later the court refused to issue a stay of its order and branded as "erroneous and misleading" statements by Governor Wallace about the order.

On April 4, following criticism by some legislators of a student government symposium at the University of Alabama, university president Frank A. Rose gave strong backing to the principle of academic freedom. A few days later, Gary Dickey, editor of the Troy State College newspaper, who had supported Rose, was subjected to editorial censorship. His subsequent disciplining and expulsion from school prompted litigation that was still under way at the end of the year. Rose testified on April 17 before a legislative committee against proposed legislation prohibiting people with Communist inclinations from speaking at state colleges and universities.

Other Civil Rights Actions. State and federal courts were considering the legality, under the Civil Rights Act of 1964, of certain provisions of Alabama's public welfare program, mental health program, and prison system. Early in 1967 the federal government threatened to cut off funds from the state's welfare and mental health programs unless they complied with federal antidiscrimination standards.

On June 8, Governor Wallace vetoed an Office of Economic Opportunity (OEO) grant of nearly $400,000 to a farmer's cooperative in southwest Alabama because of its alleged association with civil rights activities. This veto was subsequently overridden by Sargent Shriver, head of the OEO.

Governor's Illness. Governor Wallace announced on June 26 that medical tests indicated the existence of a malignancy that might require surgery. In July she entered the M. D. Anderson Hospital of the University of Texas, where she underwent surgery for the removal of a tumor in the lower abdomen. She returned to Houston for postoperative treatment at various times during the remainder of the year.

Constitutional Referendum. In a special constitutional referendum held on December 5, Alabama's voters ratified 16 new amendments to the state's constitution. Included were measures to spend $43 million for improving and expanding state parks and $15 million for mental health facilities.

Third-Party Plans. Former Gov. George C. Wallace spent much of the year pressing his campaign as a potential third-party candidate for the presidency. Late in the year, Wallace's American Independent party qualified for listing on the 1968

ALABAMA • Information Highlights

Area: 51,609 square miles (133,667 sq km).

Population: 3,540,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Montgomery, the capital, 148,000; Birmingham, 345,000; Mobile, 222,000; Huntsville, 122,000.

Government: *Chief Officers*—governor, Mrs. Lurleen B. Wallace (Democrat); lt. gov., Albert P. Brewer (D); secy. of state, Mrs. Mabel Ames (D); atty. gen., MacDonald Gallion (D); treas., Mrs. Agness Baggett; supt. of pub. instr., Ernest Stone; chief justice, J. Ed. Livingston. *Legislature*—Legislature of Alabama (met May 2-Aug. 31, 1967; convenes May 6, 1969): Senate, 35 members (1 R, 34 D); House of Representatives, 106 members (106 D).

Education: *School enrollment* (1965–66)—public elementary, 483,000 pupils (15,300 teachers); public secondary, 385,000 pupils (14,600 teachers); nonpublic schools, 33,700 pupils (1,440 teachers); college and university (fall 1965), 67,151 students. *Public school expenditures* (1965–66)—$283,650,000 ($356 per pupil); average teacher's salary, $5,150.

Public Finance (fiscal year 1966): *Revenues*, $1,020,234,318 (4% sales tax, $166,729,564; motor fuel tax, $95,144,135; federal funds, $284,390,659). *Expenditures*, $953,290,719 (education, $333,217,402; health, welfare, and safety, $181,091,065; highways, $179,208,815). *State debt*, $450,740,000 (Sept. 30, 1966).

Personal Income (1966): $7,254,000,000; average annual income per person, $2,066.

Public Assistance (fiscal year 1965): $113,714,502 to 149,535 recipients (aged, $91,378,157; dependent children, $10,553,852).

Labor Force (employed persons, July 1967): *Agricultural*, 82,700; *nonagricultural* (wage and salary earners), 1,131,100 (25.9% manufacturing, 15.6% trade, 16.5% government). *Unemployed persons* (July 1967)—61,800.

Manufacturing (1965): Value added by manufacture, $3,138,701,000 (transportation equipment, $181,987,000; primary metals, $807,808,000; nonelectrical machinery, $80,297,000; electrical machinery, $55,276,000).

Agriculture (1966): *Cash farm income*, $726,869,000 (livestock, $464,998,000; crops $182,254,000; govt. payments, $79,617,000). *Chief crops* (tons)—pecans, 15,000 (ranks 3d among the states); corn for grain, 729,960.

Mining (1966): *Production value*, $249.778,000. *Chief minerals* (tons)—stone, 18.814,808; bituminous coal, 12,896,633; sand and gravel, 6,423,374; clays, 2,220,336.

Fisheries (1966): *Commercial catch*, 20,562,165 pounds ($6,806,522). *Leading species*—shrimp, 10,608.185 pounds ($4,920,297); red snapper, 2,701,295 pounds ($803,248).

Transportation: (1967): *Roads* (1966), 66,644 miles (107,230 km); *motor vehicles*, 1,721,949; *railroads* (1966), 4,862 line miles (7,823 km); *airports with scheduled service*, 10.

Communications: *Telephones* 1,270,900; *television stations*, 14; *radio stations*, 149; *newspapers*, 26.

presidential election ballot in California.

Disastrous Fire. On February 7, 25 persons, including Public Service Commissioner Ed Pepper and his wife, were killed in a fire at Dale's Penthouse Restaurant in Montgomery.

ROBERT J. FRYE
University of Alabama

ALASKA

Disaster struck Alaska in 1967 when, on August 14–15, the Chena River flooded Fairbanks, the state's second largest city. More than 18,000 persons were evacuated from the area at the peak of the flood. Damage was estimated at $176 million. The centennial exhibit in Fairbanks, commemorating the U. S. purchase of Alaska from Russia, was extensively damaged and did not reopen.

President Johnson declared Alaska a disaster area and alloted $1 million in federal funds for flood relief. In a special 6-day session of the Alaska legislature, expenditures of $15.2 million were authorized for the flood area. Homeowners who repaired damage prior to May 1968 were to be granted a property tax credit equal to 12% of the cost of repairs. Gov. Walter J. Hickel was authorized to spend up to $1 million for post-disaster work, and unemployment insurance coverage was extended from 28 to 42 weeks. Special taxes levied to cover the flood damage included a $10 annual head tax on all wage earners to create a $7.5 million disaster fund and an increase of 1% in the oil and gas production tax.

Legislation. The regular session of the Alaska legislature convened in January with Republicans in the majority in both the House and the Senate. A majority of the bills proposed by Governor Hickel were passed. The emphasis was on the development of Alaska's economy. A $103-million budget, exceeding by $10 million the 1966 budget, was passed.

Fisheries. Alaska's salmon catch in 1967 was the smallest since the turn of the century. In southeastern, central, and western Alaska, the catch was less than one third of what it had been in 1966. Shellfish catches in 1967 were almost as large as in 1966, with a decrease in king crab and an increase in shrimp and Dungeness crab. Because of the failure of the salmon catch, the Bureau of Indian Affairs is supplying several thousand native fishermen in the Bristol Bay area in the north with food and fuel to use through the winter. In the southeast, needy fishermen will be given monthly relief checks.

ALASKA • Information Highlights

Area: 586,400 square miles (1,518,778 sq km).
Population: 273,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Juneau, the capital, 7,200; Anchorage, 49,000; Fairbanks, 14,000; Spenard; 12,000.
Government: *Chief Officers*—governor, Walter Hickel (R); secy. of state, Keith H. Miller (R); atty. gen., Edgar Paul Boyk (D); Chief of Treas. Division, Dept. of Revenue, John M. Daugherty; Commissioner of Dept. of Education, Dr. Clifford Hartman; chief justice, Buell A. Nesbett. *Legislature*—Legislature of the State of Alaska (Special session Sept. 29–Oct. 4, 1967): (met Jan. 23–April 9, 1967); Senate, 20 members (14 Republicans, 6 Democrats); House of Representatives, 40 members (25 R, 15 D).
Education: *School enrollment* (1965–66)—public elementary, 44,000 pupils (1,700 teachers); public secondary, 22,500 pupils (1,100 teachers); nonpublic schools, 2,600 pupils (180 teachers); college and university (1965), 4,734 students, *Public school expenditures* (1965–66)—$40,200,000 ($718 per pupil); average teacher's salary, $8,460.
Public Finance (fiscal year 1966): *Revenues,* $245,183,442 (no sales tax; motor fuel tax, $7,077,336; federal funds, $93,515,947). *Expenditures,* $220,052,876 (education, $49,643,538; health, welfare, and safety, $27,137,790; highways, $97,316,399). *State debt,* $65,872,000 (June 30, 1967).
Personal Income (1966): $907,000,000; average annual income per person, $3,421.
Public Assistance (fiscal 1966): $4,159,263 to 81,396 recipients (aged, $2,103,147; dependent children, $2,056,116).
Labor Force (employed persons, 106,100 1967): *Agricultural,* 1,000; *nonagricultural* (wage and salary earners), 86,400 (12.8% manufacturing, 13.8% trade, 39.1% government). *Unemployed persons* (mid-July 1967)—7,000.
Manufacturing (1965): Value added by manufacture, $106,490,000 (lumber and wood products, $13,685,000; food and products, $50,544,000).
Agriculture (1966): *Cash farm income,* $4,543,000 (livestock, $3,315,000; crops, $1,228,000).
Mining (1966): *Production value,* $82,683,000. *Chief minerals*—gold, 27,325 troy ounces; silver, 7,000 troy ounces.
Fisheries (1966): *Commercial catch,* 588,000,000 pounds ($74,000,000). *Leading species* (1965)—salmon, 274,844,200 pounds ($48,274,270); king crab, 131,670,700 pounds ($12,729,360); halibut, 30,984,000 pounds ($6,770,350).
Transportation: *Roads* (1965), 6,587 miles (10,598 km); *motor vehicles* (May 1967), 118,217; *railroads* (1967), 552.5 miles (888.9 km); *airports* (1967), 391.
Communications (1966): *Telephones* (1967), 64,000; *television stations,* 8; *radio stations,* 20; *newspapers,* 11.

Forest Industries. The Alaskan lumber industry had a record year in 1967. For the first time, stumpage receipts for a single year exceeded $1 million. The production of lumber and cants (squared logs) was 25% greater in 1967 than in 1966. The Ketchikan Pulp Company near Ketchikan provided over 210,000 tons of pulp to the eastern United States and to other countries, including India and Colombia. The 180,000 tons of pulp produced by the Alaska Lumber and Pulp Company at Sitka was shipped in its entirety to Japan. Pulpwood chips from wood waste were produced at three sawmills in Alaska and shipped to pulp mills. Construction was begun on the state's first green veneer plant, in Wrangell, in conjunction with sawmill operations there.

UPI

HOUSE BURNS unattended amid the flood waters that devastated Fairbanks, Alaska, in August. Flood damage was estimated at $176 million.

Oil, Gas, and Chemicals. With the completion of more drilling platforms in Cook Inlet, oil production in that key area has exceeded 88 million barrels, with a daily production in excess of 120,000 barrels. A large chemical complex consisting of an ammonia plant and a urea plant was under construction on the Kenai Peninsula. A plant to liquify natural gas for shipment to foreign countries will be completed on the peninsula in 1968.

Power. Work progressed on the Snettisham hydroelectric project south of Juneau in 1967. It is expected to produce 47,000 kilowatts by 1972.

Tourism. Alaska's tourist business, as reflected in the traffic using the three seagoing ferries that run from Prince Rupert in British Columbia to Skagway, increased during 1967. The ferries carried about 13% more passengers and 12% more cars and trucks than in 1966. Half-decks are being installed over the vehicle sections of the ferries to increase their vehicle capacity by 20%.

Litigation. Two important cases involving Alaska school teachers were in the courts in 1967. In one case, the superior court of the state of Alaska ruled that the election to the state legislature of three teachers directly employed by the state department of education was in violation of the state constitution. The case was appealed to the state supreme court.

The other case concerned two teachers who were discharged from their jobs because they openly criticized the school administration. Their case, which involves freedom of speech, will be heard by the U. S. Supreme Court.

I. J. MONTGOMERY
Former Director, Alaska Merit System

ALBANIA

Albania in 1967 launched the second phase of her Chinese-inspired cultural revolution. On February 6, Enver Hoxha, first secretary of the Albanian Labor party (Communist), issued an appeal to his countrymen to eradicate all remaining bourgeois influences from their homeland. A month later the party launched a concerted drive to "emancipate" Albanian women. The Albanian Red Guards, first organized in 1966, were given a major role in implementing these party decrees.

While it appears that the Albanian cultural revolution was in part initiated to please the Chinese, there were also a number of purely national considerations that prompted the Albanian leadership to take this action. Among the most important of these were the desires of the Albanian rulers to bring all aspects of Albanian life under strict party control, rekindle a revolutionary spirit among the youth of Albania, and eliminate "revisionist" influences.

Foreign Relations. Albania remained Communist China's most faithful ally during the year. The two nations exchanged numerous delegations and pursued a common policy toward the Soviet Union, the Communist bloc, and the non-Western world.

An Albanian delegation headed by Defense Minister Beqir Balluku and Politburo member Hsyni Kapo visited China from January 12 to February 13 and was accorded a warm reception. In late September, Premier Mehmet Shehu went to China to participate in the celebration of the 18th anniversary of the establishment of the People's Republic of China. While in Peking, Shehu was granted an audience with Mao Tse-tung.

ALBANIA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 11,099 square miles (28,748 sq km).

Population: 1,914,000 (July 1, 1966 est.).

Chief Cities (1960 census): Tiranë (1964 est.), the capital, 156,950; Shkodër, 43,305; Vlorë, 41,423; Durrës, 39,937.

Government: *Chairman of the Presidium*—Haxhi Lleshi (took office in 1953); *Premier*—Maj. Gen. Mehmet Shehu (took office in 1954); *Communist Party First Secretary*—Gen. Enver Hoxha (took office in 1946). *Parliament*—People's Assembly, 240 members (all Albanian Labor party).

Religious Faiths: Muslims, 65% of population; Orthodox Christians, 20%; Roman Catholics, 10%; other, 5%.

Education: *Literacy rate* (1955), 71.5% of population aged 9 and over. *Total school enrollment* (1964)—417,060 (primary, 349,141; secondary, 29,783; teacher-training, 7,366; technical, 18,833; higher, 11,937).

Finance (1965 est.): *Revenues,* $684,000,000; *expenditures,* $672,000,000; *monetary unit,* lek (5 leks equal U. S.$1).

Manufacturing (metric tons): Cement (1965), 150,000; gasoline (1964), 52,000; sugar (1966), 15,000; beer (1964), 10,900; olive oil (1963), 3,000.

Crops (metric tons, 1964–65 crop year): Maize, 188,000; sugar beets, 135,000; wheat, 124,000; cottonseed (1966), 16,000; oats, 15,000; barley, 8,000; rye, 6,000.

Minerals (metric tons, 1965): Crude petroleum, 800,000; nickel ore, 370,000; coal, 350,000; chromite, 315,000; copper ore, 160,000.

Foreign Trade (1964): *Exports,* $60,000,000 (chief exports: fuels, minerals, and metals, $32,500,000; foodstuffs, $13,800,000; raw organic materials, $10,000,000); *imports,* $98,000,000 (chief imports: machinery and equipment, $48,680,000; fuels, minerals, metals, $14,680,000; raw materials for food industry, $11,320,000). *Chief trading partners* (1964): Communist China (took 41% of exports, supplied 63% of imports); Czechoslovakia (took 19% of exports, supplied 9% of imports); Poland (took 10% of exports, supplied 7% of imports).

Transportation: *motor vehicles* (1965), 7,800 (automobiles, 2,300); *railways* (1965), 65 miles (105 km); *merchant vessels* (1966), 8 (33,000 gross registered tons).

Communications: *Telephones* (1966): 4,813; *television stations* (1967), 1; *television sets* (1967), 1,000; *radios* (1964), 76,000; *newspapers* (1965), 2 (daily circulation, 87,000).

Among the most interesting of the Chinese groups to visit Albania was a contingent of Red Guard leaders who attended the fifth congress of the Working Youth of Albania (June 26-June 29).

Tiranë and Peking continued their attacks on the foreign and domestic policies of the USSR and the Communist states of eastern Europe. Albania and China both claimed that the Soviet Union was in league with the United States to undermine world communism.

Despite the continuing hostility of the Albanians, the USSR in late June sought at least a partial reconciliation with Albania by offering to resume trade. Albania rejected this overture just as it rejected a Russian invitation to participate in the Soviet Union's celebration of the 50th anniversary of the Bolshevik Revolution.

In March the United States made a modest gesture toward improving relations with Albania by lifting the ban on travel by United States citizens in Albania. The Albanians responded by issuing a regulation prohibiting U. S. citizens from entering their country.

Economic Developments. While it appeared that the industrial sector of the economy was meeting its goals under the fourth 5-year plan (1966–70), the agricultural sector of the Albanian economy continued to be plagued with problems. To remedy this situation the government sought to achieve virtually complete collectivization of agriculture and to grant concessions to the peasants. The state made additional credit available to farmers, lowered their taxes, and permitted them to buy consumer goods and tools at special reduced prices. In April, retail prices were reduced on a nationwide basis by 10 to 30%.

NICHOLAS C. PANO
Western Illinois University

ALBEE, Edward. See biographical sketch under AMERICAN LITERATURE.

ALBERTA

Alberta in 1967 continued the economic and social advances that it has made with virtually no interruption since the end of World War II. As during the past several years, the chief economic progress was realized in development of the north.

Economy. A decline in grain production, caused by inadequate moisture, was largely compensated for by excellent harvesting weather. This resulted in high grades for grain, particularly wheat, although markets were less buoyant in 1967 than before.

Oil production expanded rapidly at Rainbow Lake, where a "new town" of the same name was established. Other "new towns" in northern Alberta are Grande Cache (1966) and Fox Creek (1967). Construction advanced on the Alberta Resources Railway, which will open up lumbering, coal, gas, and oil areas.

Government. A general election on May 23, 1967, saw the Social Credit government easily returned to office, although Education Minister R. H. McKinnon lost his post. Raymond Reierson succeeded him, while also retaining the labor portfolio. Alfred J. Hooke succeeded retired Leonard C. Halmrast as minister for welfare. Newly elected Peter Lougheed headed the Conservative opposition, which won six seats.

Education. A third provincial university, that of Lethbridge, opened in 1967. Increasing concern was devoted to other post-school education besides that at the university level. Attention was also given to the increasing integration of Indians into the system of provincial public education.

Human Resources. A staff was recruited for the federal-provincial Alberta New Start anti-poverty project in the northeast.

J. W. CHALMERS
St. Albert Protestant
Separate School District #6

ALBERTA • Information Highlights

Area: 255,285 square miles (661,189 sq km).

Population: 1,463,203 (1966 census).

Chief Cities (1966 census): Edmonton, the capital, 376,925; Calgary, 330,575; Lethbridge, 37,186; Red Deer, 26,171.

Government: *Chief Officers*—lt. gov., J. W. Grant MacEwen; premier and atty. gen., Ernest C. Manning (took office May, 1967; Social Credit); prov. secy., Ambrose Holowach (SC); prov. treas., Anders O. Aalborg (SC); min. of educ., Raymond Reierson (SC); chief justice, Sidney Bruce Smith. *Legislature*—Legislative Assembly (convened Feb. 15, 1968); 65 members (55 Social Credit, 6 Progressive Conservative, 3 Liberal, 1 Independent).

Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 350,906 pupils (14,702 teachers), private schools, 6,292 pupils (354 teachers); Indian (federal) schools, 3,836 pupils (178 teachers); college and university (fall 1966), 16,983 students. *Public school expenditures* (1963)—$153,424,000 ($495 per pupil); average teacher's salary (1964–65 est.) $6,053.

Public Finance (fiscal year 1967 est.): *Revenues*, $469,830,000 (sales tax, $48,880,000; income tax, $88,977,000; federal funds, $10,633,000). *Expenditures*, $532,240,000 (education, $186,610,000; health and social welfare, $138,660,000; transport and communications, $86,190,000).

Personal Income (1966 est.): $3,243,000,000; average annual income per person, $2,215.

Public Assistance (fiscal year 1967 est.): $35,850,000 (chiefly to aged and blind, $6,670,000; dependents and unemployed, $18,540,000).

Manufacturing (1964): Value added by manufacture, $433,187,000 (chemical products $50,393,000; nonmetallic mineral products, $43,030,000; fabricated metals, $38,791,000; food and beverages, $120,736,000).

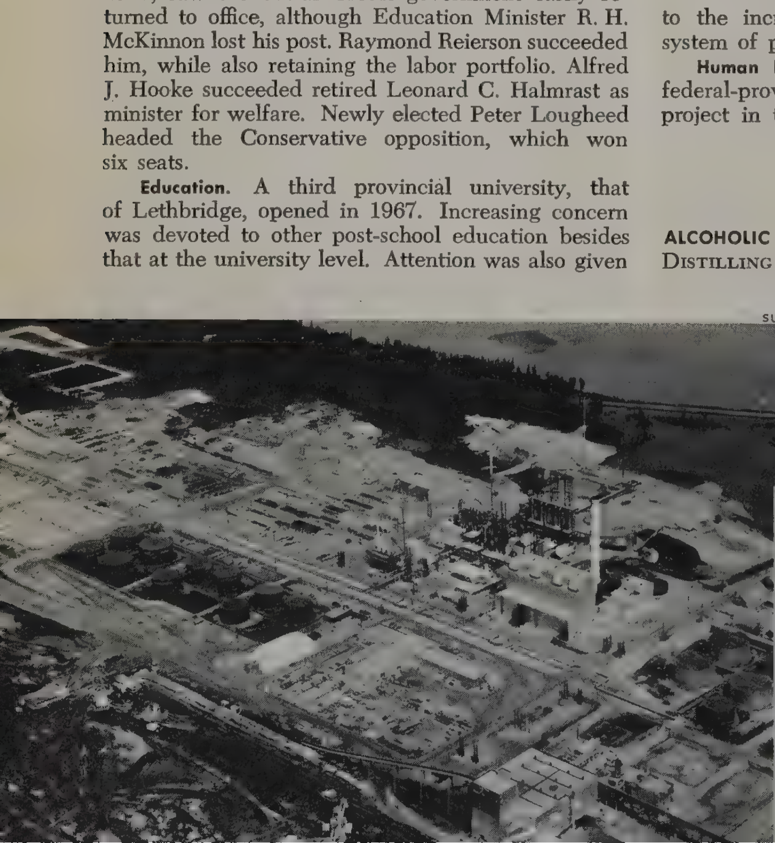
Agriculture (1966 est.): *Cash farm income*, $760,732,000 (livestock, $388,519,000; crops, $357,406,000; govt. payments, $13,895,000). *Chief crops* (cash receipts)—wheat, $184,429,000 (ranks 2d among provinces); barley, $42,604,000 (ranks 1st); rapeseed, $18,588,000, (ranks 2d); flaxseed, $11,230,000 (ranks 3d); oats, $7,589,000 (ranks 3d).

Mining (1966 est.): *Production value*, $871,349,673. *Chief minerals* (short tons)—elemental sulfur, 1,876,000 (ranks 1st among the provinces by value); cement, 844,500 (ranks 3d); sand and gravel, 13,633,654 (ranks 4th); crude petroleum, 203,500,000 barrels (ranks 1st); natural gas, 1,293,829,000 thousands of cubic feet (ranks 1st); natural gas by-products (cash value), $93,439,000 (ranks 1st).

Transportation: *Roads* (1965), 78,746 miles (126,696 km); *motor vehicles* (1965), 606,754; *railroads* (1966) 5,680 track miles (9,139 km); *licensed airports* (1966), 43.

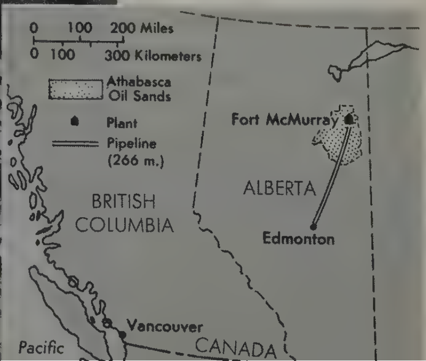
Communications: *Telephones* (1965), 538,356; *television stations* (1967), 7; *radio stations* (1966), 20; *newspapers* (1966), 7 (daily circulation, 290,951).

ALCOHOLIC BEVERAGES. See BREWING INDUSTRY; DISTILLING INDUSTRY.



SUN OIL COMPANY

MASSIVE NEW PLANT has been built to process crude oil obtained from the rich deposits found in the oil sands near Fort McMurray, in northern Alberta. Athabasca River is in the background.



ALGERIA

The Middle East crisis in June and an attempted coup in December dominated events in Algeria in 1967. The regime of President Houari Boumedienne seized the opportunity presented by the war to silence the opposition and rally the masses. But when the danger had passed, antigovernment forces staged a coup.

The Opposition. Early in 1967 dialogue between the government and the governed was breaking down. Opposition movements were organizing in Europe, and students and labor unions were pressing for a share in decisions. Efforts at solidifying the nation's single party, the National Liberation Front (FLN), had failed. Peasants refused to hand over surplus crops, and urban residents were negligent in paying taxes.

A circle of Boumedienne's close associates known as the "Oujda group" (Foreign Minister Abdelaziz Bouteflika, Interior Minister Ahmed Medgheri, and Finance Minister Ahmed Kaid) had become the arbiters of power, assisted by the technocrats led by the minister of industry and energy, Belaid Abdesselam. To many in the opposition it seemed that the regime was intent on creating a bureaucratic, highly centralized state and limiting the influence of ex-guerrilla fighters, now integrated in the army, as well as that of labor unions and students. Army Chief of Staff Col. Tahar Zbiri crystallized this discontent and become the leader of the opposition.

Effects of the June War. The Israeli-Arab war occurred at a propitious moment for the Boumedienne camp, who attempted to use it as a rallying point and as a means of squelching seditious movements. For several days Algerians were led to believe that the war front stood at their own front doors. As soon as Israel attacked Egypt, Algeria declared war on Israel, introduced an emergency budget, levied special taxes, mobilized the population, and dispatched troops and equipment to the front.

Imbued with war fervor, mobs sacked the U. S. cultural center and marched on the British embassy. The press and radio labeled the British and Americans aggressors and charged them with having flown air cover for Israel. Algeria broke relations with the United States on June 6; relations with Britain had been severed earlier over Britain's allegedly "soft" policies toward Rhodesia. Washington withdrew its ambassador and cut off $20 million in aid.

WIDE WORLD

PRESIDENT Boumedienne (*left*) inspects troops at Algiers before they were sent to aid Egypt in the June war.

Mutiny. It proved easier, however, to mobilize than to demobilize. After a month of listening to the slogan "the Arabs only lost a battle but will win the war," Algerians became weary of their state of emergency—especially as the foreign news media informed them that events had not taken place as their government had indicated. However, President Boumedienne had had sufficient time to shore up his support in the army, and when the mutiny broke he stood ready.

An attempt at rebellion by Zbiri on November 1 led Boumedienne to station tanks and reinforcements on the major roads leading to the capital. When Zbiri staged his attempted coup on the night of December 14, the rebels were stopped en route to Algiers. The following day the coup was reported crushed. Zbiri fled to the mountains; his ally, Labor Minister Abdelaziz Zerdani, disappeared, and the

ALGERIA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 919,590 square miles (2,381,741 sq km).
Population: 12,101,994 (1966 census).
Chief Cities (1966 census of city and suburbs): Algiers, the the capital, 943,142; Oran, 328,257; Constantine, 253,649.
Government: *President*—Col. Houari Boumedienne (took office July 5, 1965). *Revolutionary Council*, 26 members.
Religious Faiths: Muslims, 84% of population.
Education: *Total school enrollment* (1965)—1,352,280 (primary, 1,270,150; secondary, 40,480; teacher-training, 1,716; technical, 34,008; higher, 5,926).
Finance (1966 est.): *Revenues*, $640,000,000; *expenditures*, $640,000,000; *monetary unit*, dinar (4.937 dinars equal U. S.$1).
Gross National Product (1965): $2,500,000,000.
Economic Indexes (1966): *Industrial production* (1960), 116 (1958=100); *agricultural production*, 81 (1957–59=100); *cost of living*, 103 (1964=100).
Manufacturing (metric tons): Wine (1966), 2,066,000; natural gasoline (1965), 556,000; wheat flour (1965), 355,000; beer (1965), 31,600; olive oil (1966), 15,000.
Crops (metric tons, 1966): Grapes, 2,091,000; wheat, 722,000; citrus fruit, 350,000; barley, 136,000; dates (1965), 110,000.
Minerals (metric tons, 1965): Crude petroleum (1966), 33,168,000; iron ore, 3,132,000; phosphate rock, 86,000; pyrite, 57,000; natural gas (1966), 2,040,000 cubic meters.
Foreign Trade (1965): *Exports*, $707,000,000 (chief exports, 1964: crude petroleum, $431,000,000; wine, $94,000,000; citrus fruit, $34,000,000; iron ore, $30,000,000); *imports*, $745,000,000 (chief imports, 1964: sugar, $34,400,000; iron and steel products, $30,500,000; apparel and accessories, $26,500,000). *Chief trading partner* (1964 est.): France (took 85% of exports, supplied 80% of imports).
Transportation: *Roads* (1965), 55,000 miles (88,495 km); *motor vehicles* (1965), 305,500; *railways* (1965), 2,548 miles (4,100 km); *merchant vessels* (1966), 4 (15,000 gross registered tons); *national airline*, Air Algeria.
Communications: *Telephones* (1966): 140,000; *television stations* (1965), 6; *television sets* (1965), 150,000; *radios* (1963), 1,500,000; *newspapers* (1965), 5.

head of the first military region, Saïd Abid, reportedly committed suicide.

At the end of the year the police were rounding up suspects. Boumedienne was faced with the prospect of purging the army of dissidents. A cabinet reshuffle expected in 1968 is likely to crown the victory of the Oujda group and the technocrats.

Foreign Affairs. As a result of the Middle East war and internal problems, Algeria emerged as one of the most radical Arab states. Its demands that the Soviet Union break its policy of peaceful coexistence and intervene on the Arab side antagonized the Russians, who had supplied Boumedienne's regime with $250 million in aid in 1967.

On June 30 a plane carrying former Congolese Premier Moïse Tshombe was hijacked over Spain, where he was living in exile, and diverted to Algeria. Extradition of Tshombe, who was under death sentence in the Congo (Kinshasa), was approved by the Algerian supreme court on July 21. At the end of the year, however, he was still being held in Algeria, although his European companions had been released.

Late in 1967, Algeria showed signs of turning more attention to problems closer to home. Significantly, the government began mending diplomatic fences with Morocco. An arms buildup since 1966 has given Algeria a weapons edge over Morocco. As a result, Moroccan claims on Algerian territory have abated, opening the way for regional cooperation.

Economy. Crude oil production remained the brightest aspect of Algeria's economic development, reaching 38 million tons in 1967, or 15% more than in 1966, and reserves were still expanding. The prognosis for cereal production was less optimistic. Experts predicted crop yields of nearly 2 million tons (1.8 million metric tons), or double the 1966 harvest, but twice that amount is needed to feed the population. After the United States cut off its Food for Peace aid, France and the Soviet Union began making up the shortage.

Another agrarian problem was the wine surplus, unmarketable after France backed out of a huge purchase commitment. The government sought to convert vineyards into more profitable cash crops.

Nationalization of commercial enterprises continued in 1967. By June, 13 U. S. and British firms —mainly oil companies—were placed under state control and supervision, while 3 retail distributors (Esso, Mobil, and Shell), as well as Procter and Gamble's Algerian affiliate, were nationalized. The government promised to pay indemnities.

Stuart Schaar
University of Wisconsin

ALLILUYEVA, Svetlana. See biographical sketch under Union of Soviet Socialist Republics.

ALUMINUM

The North American aluminum industry was expected to set a sixth consecutive record year of production in 1967. During the year, the industry's customers reduced their excess inventories, causing a slowdown in the growth of product shipments.

Production. The output of primary aluminum in 1966 totaled a record 2,968,366 tons in the United States, 902,012 tons in Canada, and 23,470 tons in Mexico (short tons). Once again North America's record production accounted for slightly more than half of the estimated world output of 7.7 million tons. Production in 1967 was expected to total about 3.3 million tons in the United States, 950,000 tons in Canada, and 24,000 tons in Mexico.

Industry Expansion. Primary aluminum production capacity in North America was expanded in 1967 to more than 4.3 million tons, an increase of nearly 400,000 tons, or about 10% above the capacity at the end of 1966. The Aluminum Company of America raised its capacity by 100,000 tons by adding new potlines at its plants at Badin, N. C., and Wenatchee, Wash. The Intalco Aluminum Corporation added 76,000 tons of new capacity, doubling the capacity of its plant at Bellingham, Wash. Ormet, Inc., added a 55,000-ton line to its smelter at Omal, Ohio. Kaiser Aluminum & Chemical Corporation increased its overall capacity by 20,000 tons, and Reynolds Metals Company increased its capacity by 90,000 tons. Alcan Aluminium Limited increased its overall Canadian capacity by about 88,000 tons.

Shipments and Markets. Net U. S. shipments of aluminum ingots and mill products (including primary, secondary, and imported metal) to markets in 1966 was a record 4,528,000 tons. The percentage distribution of these shipments to major markets was as follows: transportation, 23.1%; building and construction, 21.6%; electrical, 14.4%; consumer durables, 10.1%; packaging, 8.1%; machinery and equipment, 7.2%; exports, 6.5%; and all other, 9.0%.

The two largest U. S. markets for aluminum products in 1967 continued to be the building and transportation industries. Defense shipments, largely included in the transportation market, once again accounted for the largest percentage increase. In the civilian market, the largest increase was in the container and packaging field, where more and more aluminum was being used in the ends and bodies of cans. The second largest increase was in the electrical conductor field, where the expansion of transmission line facilities and the high price of copper spurred the use of aluminum. Shipments of aluminum products to other major markets declined or leveled off during 1967 as customers worked off excess inventories.

Exports. In 1966 the major exporters of primary aluminum in the non-Communist world were Canada (716,476 tons), Norway (383,612), France (188,543), the United States (188,239), Cameroon (53,086), and Austria (40,878). The major exporters of aluminum semifabricated products in 1966 were Belgium-Luxembourg (136,146 tons), the United States (97,859), West Germany (88,505), France (64,092), the United Kingdom (50,599), and Canada (35,051). (See also Mining).

Stanley V. Malcuit
Aluminum Company of America

AMBASSADORS AND ENVOYS

Ellsworth Bunker, a former U. S. ambassador-at-large with experience in difficult diplomatic situations, succeeded Henry Cabot Lodge as U. S. ambassador to South Vietnam in March 1967. The United Arab Republic (with some other members of the Arab League) and the United States severed diplomatic relations during the Israeli-Arab war in June. Diplomatic ties have not been reestablished. The following is a list of ambassadors and envoys from and to the United States as of Dec. 31, 1967. Diplomatic designations are as follows: A—ambassador extraordinary and plenipotentiary; CA—chargé d'affaires.

Country	*From U. S.*	*To U. S.*
Afghanistan	Robert G. Neumann (A)	Abdullah Malikyar (A)
Argentina	Edwin M. Martin (A)	Alvaro C. Alsogaray (A)
Australia	Edward Clark (A)	John Keith Waller (A)
Austria	Douglas MacArthur II (A)	Ernst Lemberger (A)
Barbados	Frederic R. Mann (A)	....
Belgium	Ridgway B. Knight (A)	Louis Scheyven (A)
Bolivia	Douglas Henderson (A)	Julio Sanjines-Goytia (A)
Botswana	....	Zachariah K. Matthews (A)
Brazil	John W. Tuthill (A)	Vasco Leitao da Cunha (A)
Bulgaria	John M. McSweeney (A)	Luben Guerassimov (A)
Burma	Henry A. Byroade (A)	U Tun Win (A)
Burundi	....	Terence Nsanze (A)
Cameroon	Robert L. Payton (A)	Joseph N. Owono (A)
Canada	W. Walton Butterworth (A)	A. Edgar Ritchie (A)
Central Afr. Rep.	Geoffrey W. Lewis (A)	Michel Gallin-Douathe (A)
Ceylon	Andrew V. Corry (A)	O. Weerasinghe (A)
Chad	Sheldon B. Vance (A)	Boukar Abdoul (A)
Chile	Edward M. Korry (A)	Radomiro Tomic (A)
China (Taiwan)	Walter P. McConaughy (A)	Chow Shu-Kai (A)
Colombia	Reynold E. Carlson (A)	Hernan Echavarria (A)
Congo (Kinshasa	Robert H. McBride (A)	Cyrille Adoula (A)
Costa Rica	Clarence A. Boonstra (A)	Fernando Ortuño (A)
Cyprus	Taylor G. Belcher (A)	Zenon Rossides (A)
Czechoslovakia	Jacob D. Beam (A)	Karel Duda (A)
Dahomey	Clinton E. Knox (A)	Maxime-Leopold Zollner (A)
Denmark	Katharine E. White (A)	Torben Rønne (A)
Dominican Republic	John H. Crimmins (A)	Hector Garcia-Godoy (A)
Ecuador	Wymberley De R. Coerr (A)	Carlos Mantilla-Ortega (A)
El Salvador	Raul H. Castro (A)	Ramon de Clairmont-Dueñas (A)
Ethiopia	William O. Hall (A)	Getachew Abdi (CA)
Finland	Tyler Thompson (A	Olavi Munkki (A)
France	Charles E. Bohlen (A)	Charles Lucet (A)
Gabon	David M. Bane (A)	Louis Owanga (A)
Gambia	L. Dean Brown (A)	....
Germany	George C. McGhee (A)	Heinrich Knappstein (A)
Ghana	Franklin H. Williams (A)	Ebenezer Moses Debrah (A)
Great Britain	David K.E. Bruce (A)	Patrick Dean (A)
Greece	Phillips Talbot (A)	Christian Xanthopoulos-Palmas (A)
Guatemala	John G. Mein (A)	Francisco Linares Aranda (A)
Guinea	Robinson McIlvaine (A)	Karim Bangoura (A)
Guyana	Delmar Carlson (A)	John Carter (A)
Haiti	Claude G. Ross (A)	Arthur Bonhomme (A)
Honduras	Joseph J. Jova (A)	Ricardo Midence Soto (A)
Hungary	Martin J. Hillenbrand (A)	Sándor Jozan (CA)
Iceland	Karl F. Rolvaag (A)	Petur Thorsteinsson (A)
India	Chester Bowles (A)	Ali Yavar Jung (A)
Indonesia	Marshall Green (A)	Suwito Kusumowidagdo (A)
Iran	Armin H. Meyer (A)	Hushang Ansary (A)
Ireland	Raymond R. Guest (A)	William P. Fay (A)
Israel	Walworth Barbour (A)	Avraham Harman (A)
Italy	G. Frederick Reinhardt (A)	Egidio Ortona (A)
Ivory Coast	George A. Morgan (A)	Timothée N' Guetta Ahoua (A)
Jamaica	Walter N. Tobriner (A)	Egerton R. Richardson (A)
Japan	U. Alexis Johnson (A)	Takeso Shimoda (A)
Jordan	Findley Burns, Jr. (A)	Abdul Hamid Sharaf (A)
Kenya	Glenn W. Ferguson (A)	Burudi Nabwera (A)
Korea	William J. Porter (A)	Dong Jo Kim (A)
Kuwait	Howard R. Cottam (A)	Talat Al-Ghoussein (A)
Laos	William H. Sullivan (A)	Khamking Souvanlasy (A)
Lebanon	Dwight J. Porter (A)	Ibrahim Hussein El-Ahdab (A)
Lesotho	....	Albert S. Mohale (A)
Liberia	Ben Brown, Jr. (A)	S. Edward Peal (A)
Libya	David D. Newsom (A)	Fathi Abidia (A)
Luxembourg	George J. Feldman (A)	Maurice Steinmetz (A)
Malagasy Republic	David S. King (A)	Louis Rakotomalala (A)
Malawi	Marshall P. Jones (A)	Nyemba Wales Mbekeani (A)
Malaysia	James D. Bell (A)	Tan Sri Ong Yoke Lin (A)
Maldives	Andrew V. Corry (A)	....
Mali	C. Robert Moore (A)	Moussa Léo Keita (A)
Malta	George J. Feldman (A)	Aruid Pardo (A)
Mauritania	....	Abdallahi Ould Daddah (A)
Mexico	Fulton Freeman (A)	Hugo B. Margain (A)
Morocco	Henry J. Tasca (A)	Ahmed Osman (A)
Nepal	Carol C. Laise (A)	Padma Bahadur Khatri (A)
Netherlands	William R. Tyler (A)	Carl W. A. Schurmann (A)
New Zealand	John F. Henning (A)	Frank Corner (A)
Nicaragua	Kennedy Crockett (A)	Guillermo Sevilla-Sacasa (A)
Niger	Robert J. Ryan (A)	Adamou Mayaki (A)
Nigeria	Elbert G. Matthews (A)	N. Ade Martins (A)
Norway	Margaret Joy Tibbetts (A)	Arne Gunneng (A)
Pakistan	Benjamin H. Oehlert, Jr. (A)	Agha Hilaly (A)
Panama	Charles W. Adair, Jr. (A)	Ricardo M. Arias Espinosa (A)
Paraguay	Benigno C. Hernandez (A)	Juan Plate (A)
Peru	J. Wesley Jones (A)	Celso Pastor (A)
Philippines	William McC. Blair, Jr. (A)	José F. Imperial (CA)
Poland	John A. Gronouski (A)	Jerzy Michalowski (A)
Portugal	W. Tapley Bennett, Jr. (A)	Vasco Vieira Garin (A)
Rumania	Richard H. Davis (A)	Corneliu Bogdan (A)
Rwanda	Leo G. Cyr (A)	Celestin Kabanda (A)
Saudi Arabia	Hermann F. Eilts (A)	Ibrahim Al-Sowayel (A)
Senegal	L. Dean Brown (A)	Ousmane Socé Diop (A)
Sierra Leone	Robert G. Miner (A)	Christopher Cole (A)
Singapore	Francis J. Galbraith (A)	Wong Lin Ken (A)

WIDE WORLD

ELLSWORTH BUNKER, ambassador to South Vietnam, shown at his arrival for consultations in Washington, where he was met at the airport by U. S. ambassador to Nepal Carol Laise. Ambassadors Bunker and Laise were married in 1967.

LIST OF AMBASSADORS AND ENVOYS, Continued

Country	*From U. S.*	*To U. S.*
Somali Republic	Raymond L. Thurston (A)	Ahmed Mohamed Adan (A)
South Africa	William M. Rountree (A)	H.L.T. Taswell (A)
Spain	Angier B. Duke (A)	Marquis de Merry del Val (A)
Sweden	William W. Heath (A)	Hubert de Besche (A)
Switzerland	John S. Hayes (A)	Felix Schnyder (A)
Tanzania	John H. Burns (A)	Michael Lukumbuzya (A)
Thailand	Leonard Unger (A)	Arun Panupong (CA)
Togo	Albert W. Sherer, Jr. (A)	Alexandre Ohin (A)
Trinidad and Tobago	William A. Costello (A)	Ellis Emmanuel Innocent Clarke (A)
Tunisia	Francis H. Russell (A)	Rachid Driss (A)
Turkey	Parker T. Hart (A)	Melih Esenbel (A)
Uganda	Henry E. Stebbins (A)	E. Otema Allimadi (A)
USSR	Llewellyn E. Thompson (A)	Anatoliy F. Dobrynin (A)
Upper Volta	Elliott P. Skinner (A)	Paul Rouamba (A)
Uruguay	Henry A. Hoyt (A)	Juan Felipe Yriart (A)
Venezuela	Maurice M. Bernbaum (A)	Enrique Tejera-Paris (A)
Vietnam	Ellsworth Bunker (A)	Bui Diem (A)
Yugoslavia	C. Burke Elbrick (A)	Bogdan Crnobrnja (A)
Zambia	Robert C. Good (A)	Rupiah B. Banda (A)

AMERICAN LIBRARY ASSOCIATION

The American Library Association (ALA) opened its principal international relations office in Washington, D. C., in 1967, and the controversial question of whether the whole ALA headquarters office should move to Washington or remain in Chicago was decided by a vote of the membership to remain in Chicago.

National Library Commission. In 1967, officers, committee chairmen, and staff members of the ALA appeared before the National Advisory Commission on Libraries to present information and opinions directed toward the commission's objective: "to appraise the role and adequacy of our libraries, now and in the future." The commission, made up of distinguished citizens and experts in the field of library science, was appointed by President Johnson in September 1966.

Publications. In 1967 the ALA announced plans for the largest single publication ever undertaken, a new *National Union Catalog* which will list the combined holdings of 2,000 libraries in the United States and Canada. The catalog will cover all books printed through 1955, and when complete will comprise 610 volumes, each 704 pages in size.

Among publications of interest to librarians that were issued in 1967 were *Library Statistics: A Handbook of Concepts, Definitions and Terminology,* which isolates and defines those aspects of library activity that can be measured and expressed in numerical terms; and *Books for College Libraries,* a selected list of 53,000 titles to support a college teaching program. The official code for cataloging all types of library materials, *Anglo-American Cataloging Rules,* was prepared by the ALA with the collaboration of the Library of Congress and the British and Canadian library associations.

Conference. The 86th annual conference of the American Library Association was held in San Francisco from June 25 to July 1. The more than 8,000 delegates attending concentrated on the critical shortage of library manpower. New officers installed were: Foster E. Mohrhardt of the National Agricultural Library, president; Roger H. McDonough of the New Jersey State Library, first vice president and president-elect; and Mrs. Carma Russell Zimmerman Leigh of the California State Library, second vice president.

Awards. The J. Morris Jones-World Book Encyclopedia-ALA Goals Award was given in two parts. The Association of College and Research Libraries received $15,000 for a junior college library information center, and the American Library Trustee Association was awarded $9,000 to support workshops for state library trustee associations. Louis Shores, retired dean of the Library School at Florida State University, Tallahassee, received two awards: the Beta Phi Mu Award for distinguished service to education in librarianship, and the Isadore Gilbert Mudge Citation for contributions to reference librarianship.

The Melvil Dewey Medal and citation for creative professional achievement went to Walter H. Kaiser, librarian of the Wayne County (Mich.) Library. The Exhibits Round Table Award was presented to the Intellectual Freedom Committee of the California Library Association.

The Grolier Award for achievement in guiding and stimulating the reading of children and young people was won by Lura E. Crawford, director of the Oak Park and River Forest (Ill.) High School Library. Edmon Low, librarian at the Oklahoma State University Library, Stillwater, received the Joseph W. Lippincott Award for distinguished service in the library profession.

The John Newbery Medal was presented to Irene Hunt for *Up a Road Slowly.* The Caldecott Medal went to Evaline Ness, author and illustrator of *Sam, Bangs, & Moonshine.* The H. W. Wilson Library Periodical Award went to *The British Columbia Library Quarterly,* edited by Alan Woodland.

Helen T. Yast, librarian, American Hospital Association, received the Association of Hospital and Institutional Libraries' Award, and Mrs. Ruth Sheahan Howard, staff librarian, Fort Meade, Md., was the recipient of the Armed Forces Librarians Section Achievement Citation.

The Francis Joseph Campbell Citation for advancing library service to the blind was presented to Kenneth Jernigan, director of the Iowa Commission for the Blind.

G. Sumner Spalding, editor of *Anglo-American Cataloging Rules,* received the Margaret Mann Citation. Recipients of Trustee Citations were Mrs. Helen W. Sweasy, trustee of the Carnegie-Lawther Public Library, Red Wing, Minn., and James L. Love, board chairman of the T. L. L. Temple Memorial Library, Diboll, Tex.

Scholarships and Grants. The Grolier-Americana Scholarships in school librarianship went to the graduate library program at Florida State University, Tallahassee, and to the undergraduate program at the University of Maryland, College Park.

For study in the field of library work, the Frederic G. Melcher Scholarship was presented to Mrs. Florence L. Willson of Prince George, British Columbia. Mrs Sharon Midkiff Edge of Fordsville, Ky., received the Library Binding Institute Scholarship Award. Clayton E. Rhodes, school liaison librarian at the Enoch Pratt Free Library, Baltimore, received the E. P. Dutton-John Macrae Award to support his study proposal on school and public library relations.

(See also LIBRARIES.)

EDWARD G. STRABLE
American Library Association

AMERICAN LITERATURE

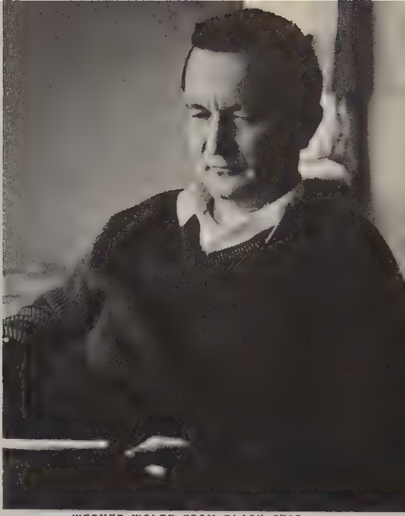
American literature in 1967 was distinguished by the large number of books produced, rather than by the arrival of any immediately recognizable classics.

Novelists were unusually productive. Although the quality of their work was somewhat uneven, excitement was ensured by the appearance of new works by such authors as William Styron, Wallace Stegner, Norman Mailer, Wright Morris, James Jones, Herbert Gold, and Philip Roth. Styron and Stegner, in particular, each published distinguished novels quite unlike anything either writer had ever written before. Other literary highlights of the year included works by such poets as Kenneth Rexroth, Robert Lowell, and John Berryman; a highly publicized account of the assassination of President John F. Kennedy by William Manchester; a new and important study of F. Scott Fitzgerald by Robert Sklar; a memoir by Edmund Wilson; and several new contributions to an understanding of the American past by a number of historians. It was also the year of the death of the beloved American poet Carl Sandburg.

The National Book Awards produced few surprises. Bernard Malamud received deserved honors in fiction for *The Fixer*. Justin Kaplan won the arts and letters award for his fine biography, *Mr. Clemens and Mark Twain,* while the history and biography award went to Peter Gay for *The Enlightenment: An Interpretation*. James Merrill's *Nights and Days* was judged the most distinguished work in poetry, and Oscar Lewis won the science, philosophy, and religion prize for *La Vida*.

Pulitzer Prizes were awarded to Bernard Malamud for *The Fixer,* to Edward Albee for his drama *A Delicate Balance,* and to Anne Sexton for her book of poetry *Live or Die*. Katherine Anne Porter and Arthur M. Schlesinger, Jr., both received medals for literary achievement from the National Institute of Arts and Letters.

Novels. The most widely discussed novel of the year was William Styron's *The Confessions of Nat Turner,* a fictionalized account of a slave rebellion that actually took place in Virginia in 1831. The story, which is narrated by Nat Turner, the leader of the rebellion, shows the effects of slavery on both masters and slaves. The book is distinguished by its memorable portrayal of Turner, who would have been an unusual man in any context. Styron manages to combine realistic dialogue with a stately 19th century narrative style that a few critics found jarring, but that is on the whole very skillfully handled. Historically sound, the novel also contains trenchant if indirect commentary on the relations between races in our own time.



WILLIAM STYRON received wide acclaim for his study of a rebellion in *The Confessions of Nat Turner.*

WERNER WOLFF FROM BLACK STAR

Equally impressive, in a very different way, was Wallace Stegner's novel, *All the Little Live Things,* a work that deals with the contemporary scene. The book, which is set in California, presents a moving study of the conflict between the generations as an older man tries to find some meeting ground between himself and the hippies who settle near him, and also attempts to cope with personal tragedy. The problems are not resolved in the novel, but Stegner provides a strong affirmation of life and of the need for an effort at understanding among people of very different temperaments and backgrounds. In this novel also, Stegner reveals once again his unusual talent for evoking and depicting nature.

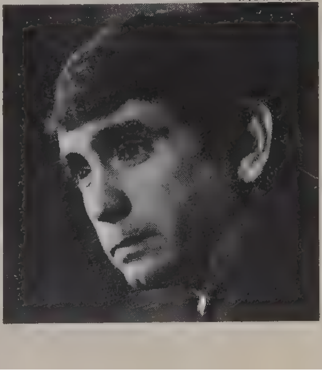
A number of well-known novelists of the postwar generation produced new works this year. Norman Mailer's *Why Are We in Vietnam?* is only indirectly concerned with U. S. involvement in Asia. This strong but self-indulgent book actually represents a further step in Mailer's exploration of American sexual behavior. Sex is also emphasized in James Jones' *Go to the Widow-Maker,* together with skin diving and the trials of a writer who in many ways resembles Jones himself. The style is turgid, the book is overly long, and Jones' ventures into psychology are juvenile. Other disappointing novels by contemporaries of Mailer and Jones included Gore Vidal's political potboiler, *Washington, D. C.,* Vance Bourjaily's slick but unconvincing *The Man Who Knew Kennedy,* and Thomas Berger's unfortunate venture into the field of crime, *Killing Time.*

Herbert Gold's *Fathers* is described by him as a novel in the form of a memoir. It is a moving portrayal of the struggles and achievements of an immigrant Jew, who is sustained by an unquestioning acceptance of life. His vigor and persistence are in marked contrast to his son's neuroticism. Philip

EDWARD ALBEE, one of the foremost young American playwrights, won the 1967 Pulitzer Prize in drama for his play *A Delicate Balance* (1966). His earlier, controversial drama *Who's Afraid of Virginia Woolf?* (1962), which won a number of honors, including the Antoinette Perry Award, was highly successful both as a stage production and as a motion picture. In 1963, however, it was turned down by the Pulitzer Prize advisory board after it had been chosen for the award by a jury. Albee's other plays include *The Zoo Story* (1958), *The Death of Bessie Smith* (1961), *The American Dream* (1961), *The Ballad of the Sad Café* (1963), *Tiny Alice* (1965), and *Malcolm* (1966).

Born in Washington, D. C., on March 12, 1928, Albee became the grandson, by adoption, of the co-founder of the Keith-Albee chain of theaters. He graduated from the Choate School in Wallingford, Conn., and attended Trinity College in Hartford, Conn., but left after three semesters. He was elected to the National Institute of Arts and Letters in 1966.

WIDE WORLD



Roth's *When She Was Good* offers a sympathetic but damning picture of a Midwestern girl whose early insecurity leads to a need to dominate those around her, and who is eventually destroyed by her own willfulness. The work is an abrupt departure, in style and subject matter, from his earlier fiction. Elizabeth Spencer's *No Place for an Angel* is a beautifully written delineation of modern marriage. Chaim Potok reached the best seller list with his novel *The Chosen*, a low-keyed but fascinating study of Jewish life in New York.

Among the writers of a still younger generation, Susan Sontag attracted the most attention with *Death Kit*, an interesting but uneven and cranky exploration of the nature and meaning of reality, coupled with a harsh criticism of contemporary American life. William Melvin Kelley's *Dem* is a satiric study of the white world as seen through the eyes of a perceptive and skeptical Negro. John A. Williams explores the possibility of love between the races in *The Man Who Cried I Am*. In *The Farm*, Clarence Cooper, Jr., gives a harrowing portrayal of the forces that drive his protagonist into drug addiction, narcotics peddling, and finally prison.

There were several fine first novels in 1967. One of the most interesting was Robert Stone's *Hall of Mirrors*, the contemporary story of three young derelicts trying to survive in the political and social maelstrom of New Orleans. The book brilliantly expresses the hazards of life in the grim underside of the affluent society. Joyce Carol Oates writes in an older tradition, piling up naturalistic detail into an impressive structure in *A Garden of Earthly Delights*. Paula Fox made a promising debut with *Poor George*. Wieslaw S. Kuniczak's *The Thousand Hour Day* depicts the downfall of Poland at the start of World War II.

A number of books by established writers deserve mention. Peter de Vries produced another of his caustically humorous morality tales in *The Vale of Laughter;* Jessamyn West returned to the scene of the American past in *Leafy Rivers;* and John Hersey presented four obtrusively symbolic characters engaged in a battle with the sea in *Under the Eye of the Storm*. Thornton Wilder published *The Eighth Day*, Wright Morris contributed one of his lesser novels in *In Orbit*, and Stanley Elkin evoked black humor in *A Bad Man*.

Short Fiction. Few noteworthy collections appeared in this somewhat neglected field. James Leo Herlihy's *The Story That Ends with a Scream, and Eight Others* demonstrates a powerful talent and a predilection for the grim and the grotesque. Louis Auchincloss continued his rather genteel examination of the upper levels of New York society in *Tales of Manhattan*. A disciple of Henry James and Edith Wharton, Auchincloss writes well but never generates much interest in his staid and often conventional characters. Paul Bowles' *The Time of Friendship* contains further studies of the exotic, nightmarish world that all of his characters inhabit.

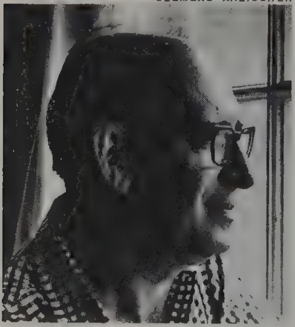
Norma Rosen revealed great insight and wrote with compassion in her book *Green: A Novella and Eight Stories*. In *People in Glass Houses: Portraits from Organization Life*, Shirley Hazzard turned a grimly amused eye on the antics of bureaucrats in the United Nations Secretariat. Michael Rumaker's *Gringos and Other Stories* details the exploits and misadventures, mostly sexual, of a sordid group of characters. Sallie Bingham contributed *The Touching Hand and Six Short Stories*.

Poetry. Several retrospective collections of poetry provided the opportunity for a look at the development of important talents. The works in Kenneth Rexroth's *The Collected Shorter Poems*, for example, demonstrate his consistent lyricism and love of life and show once again his unsurpassed ability to evoke the interplay between the natural world and human emotions. Peter Viereck's sharp eye and versatility are manifested in *New and Selected Poems, 1932–1967*, while Isabella Gardner's flexible intelligence is the dominant quality of *West of Childhood: Poems 1950–1965*. James Dickey, a younger poet who has received many honors, was represented by *Poems 1957–1967*. This collection shows that his view of the world has been steadily darkening over the years; the ebullience of his early poems is missing in the more thoughtful recent work.

A number of highly regarded poets published new collections. *Berryman's Sonnets* by John Berryman is a poetic sequence recording a summer love affair. Both humorous and sad, these poems show a modern poet's brilliant and inventive treatment of a traditional form. Robert Lowell's reputation as one of America's most powerful poets was not greatly enhanced by his *Near the Ocean*. Half the poems in Lowell's volume have contemporary settings in Maine or New York, and half are translations of classics. However, the work as a whole is uneven and surprisingly tentative for a craftsman of Lowell's stature. Richard Eberhart published *Thirty One Sonnets*, a new collection of poems that were written many years ago and that have primarily historical interest. Elizabeth Bishop's *Questions of Travel* is the product of a detached, lucid, and flexible talent.

David Wagoner, who is both a novelist and a poet, shows his versatility in *Staying Alive*, which stresses the hopeful possibilities of life in an age of tension, when mere survival is uncertain. Wagoner does not offer any easy solutions, but neither does he counsel despair. In *The Sorrow Dance*, Denise

CLEMENS KALISCHER



BERNARD MALAMUD won the 1967 Pulitzer Prize and National Book Award in fiction for his best-selling novel *The Fixer* (1966), based on the case of Mendel Beiliss, a Jew in czarist Russia, who was accused of ritual murder. His earlier novel *The Assistant* (1957) had won him the Rosenthal Award of the National Institute of Arts and Letters and the Daroff Memorial Award. A few years ago he also received a National Book Award for his collection of short stories, *The Magic Barrel* (1958). His other books include *The Natural* (1952), *A New Life* (1961), and *Idiots First* (1963).

Malamud was born in New York City on April 26, 1914, and studied at City College (B.A., 1936) and Columbia University (M.A., 1942). In 1949, after teaching evening high school in New York City for several years, he joined the English department of Oregon State College as an instructor. From 1959 to 1961 he served there as an associate professor. Since 1961 he has been a member of the literature division at Bennington College in Vermont.

WILLIAM MANCHESTER became involved in a controversy with the Kennedy family before his book, *Death of a President,* was finally approved for publication. The account of the assassination was one of the most highly publicized books in years.

THE DEATH of a PRESIDENT

PICTORIAL PARADE

Levertov also directs her attention to the strains of modern life. The poems in this volume deal with the major social and political issues of the day, and while some of them are direct and moving, others have a somewhat strident tone. A collection that focuses on one of the problems troubling Miss Levertov is *Where Is Vietnam? American Poets Respond,* edited by Walter Lowenfels. This work is more notable for the commitment of its contributors than for their poetic achievement.

Two Roman Catholic divines published new collections of poetry. Brother Antoninus (William Everard) produced *The Rose of Solitude,* speculations upon sacred and profane love drawn from his own experiences. John L'Heureux, a priest, demonstrated a tolerant and amused attitude toward the foibles of the world in *Rubrics for a Revolution.*

Among the younger poets, A. R. Ammons is still one of the most difficult to comprehend. However, his *Northfield Poems* are the product of a versatile technician. Turner Cassity's *Watchboy, What of the Night* contains a number of mannered poems, somewhat reminiscent of W. H. Auden in their persistent reliance on irony. Several women poets published volumes of interest. These include Jeannette Nichols' *Mostly People,* May Swenson's *Half Sun Half Sleep,* and Carolyn Kizer's *Knock Upon Silence.*

Literary History and Criticism. American critics were highly productive in 1967, giving special emphasis to studies on 20th century writers. One of the important works that ranged over a wide area of interest was Philip Poirier's *A World Elsewhere: The Place of Style in American Literature,* an informative and fascinating study of the interplay between technique and theme. The veteran theater critic Walter Kerr made an urbane contribution to the understanding of drama with *Tragedy and Comedy.* George Steiner published a collection of provocative essays, *Language and Silence: Essays on Language, Literature and the Inhuman.*

There were also several important scholarly editions of 19th century writers. Andrew Hilen edited *The Letters of Henry Wadsworth Longfellow, vol. 1, 1814–36; vol. 2, 1837–43.* Three volumes in the new collected edition of Mark Twain's work appeared: *Mark Twain's Letters to His Publishers, 1867–1894,* edited and with an introduction by Hamlin Hill; *Mark Twain's Satires and Burlesques,* edited and with an introduction by Franklin R. Rogers; and *Mark Twain's "Which Was the Dream?" And Other Symbolic Writings of the Later Years,* edited and with an introduction by John S. Tuckey.

Edward Wagenknecht wrote a thorough biographical study, *John Greenleaf Whittier: A Portrait in Paradox,* which shows the poet's historical importance without overstating his limited poetic achievement. Richard O'Connor carefully examined the mysterious life of Ambrose Bierce in *Ambrose Bierce: A Biography.* Jay Martin's *Harvests of Change: American Literature 1865–1914* and Larzer Ziff's *The American 1890's: Life and Times of a Lost Generation* discuss American literature of the late 19th and early 20th centuries.

Several important studies of outstanding figures in modern poetry were published in 1967. R. W. B. Lewis defended the tormented art of Hart Crane in *The Poetry of Hart Crane.* While Lewis occasionally overrates Crane's achievement, his readings of the poems are lucid and intelligent, and the book is a genuine contribution. Herbert J. Stern brought some fresh insights into the work of another difficult poet in *Wallace Stevens: The Art of Uncertainty.* In *Theodore Roethke: An Introduction to the Poetry,* Karl Malkoff produced the first extended examination of a poet whose reputation has grown steadily.

One of the most impressive studies of modern fiction was Robert Sklar's *F. Scott Fitzgerald: The Last Laocoön.* In this work, Fitzgerald is seen as a lonely defender of the romantic tradition. Sheilah Graham described Fitzgerald's reading program for her in *College of One,* an interesting footnote to the writer's life and ideas. William A. Gordon produced a study of the veteran avant-gardist Henry Miller in *The Mind and Art of Henry Miller.* Andrew Field discussed the American and Russian works of Vladimir Nabokov in a knowledgeable book, *Nabokov, His Life in Art.* Doris Grumbach provided an acerbic commentary on the life and fictional writing of satirist Mary McCarthy in *The Company She Kept.*

Two important books studied recent trends in fiction. In *The Fabulators,* Robert Scholes argues that the recent fiction of such writers as John Barth, Terry Southern, and John Hawkes displays a renewed interest in allegory and symbolism in which language becomes more important than either character or action. Daniel D. Galloway investigates

The Absurd Hero in American Fiction: Updike, Styron, Bellow, Salinger, an excursion into existentialist criticism which helps to place these writers in a philosophical context.

Among the older critics, the outlook was retrospective. *A Primer of Ignorance,* a posthumous collection of essays by Richard P. Blackmur edited by Joseph Frank, discusses the interaction of American and European cultures. Malcolm Cowley's *Think Back on Us . . . A Contemporary Chronicle of the 1930's,* edited by Henry Dan Piper, contains a number of essays written during those years for *The New Republic,* and provides useful reminders of the political and literary events of that troubled decade. Edmund Wilson's first volume of memoirs, *A Prelude: Characters and Conversations from the Earlier Years of My Life,* is an interesting collection of stories, poems, and occasional pieces from Wilson's college and war experiences through the year 1919, with his current observations on those experiences.

History and Biography. Although there were a number of books on wide-ranging topics of historical interest, the emphasis in 1967 was on studies of relatively limited sectors of American history. In *The Search for a Usable Past And Other Essays in Historiography,* the veteran historian Henry Steele Commager discussed the problems of the study of history. Allen Guttman produced a critical but careful analysis of *The Conservative Tradition in America.* Military historian Russell F. Weigly provided a *History of the United States Army.* Stephen Birmingham, a novelist and social historian, wrote an interesting study, *Our Crowd: The Great Jewish Families of New York.*

The American Revolution and the early days of the republic came in for extended examination in several books. In *The Ideological Origins of the American Revolution,* Bernard Bailyn showed that the colonists' revolt was based primarily on political and philosophical grounds. Donald Barr Chidsey selected a more limited topic, the actual fighting of the Revolution in one area: *The War in the North.*

The years between 1812 and 1861 have begun to receive a share of the attention lavished in recent years on the leaders and events of the Civil War. Several books concentrated on individual figures. Leonard Falkner wrote *The President Who Wouldn't Retire,* a study of John Quincy Adams and the decline of New England's national influence. In *Aaron Burr: Portrait of an Ambitious Man,* Herbert S. Parmet and Marie B. Hecht studied that enigmatic figure without resolving the mysteries of his character. With *James K. Polk: Continentalist, 1843–1846,* Charles Sellers produced the second in a 3-volume study of an important but obscure president.

The political and social developments of the 19th century were treated in a number of books. Roy F. Nichols studied *The Invention of American Political Parties.* Douglas T. Miller discussed *Jacksonian Aristocracy: Class and Democracy in New York, 1830–1890.* The veteran historian Frederick Merk contributed *The Oregon Question: Essays in Anglo-American Diplomacy and Politics.* The old West was the subject of two books. Allan W. Eckert's *The Frontiersman: A Narrative,* which put special emphasis on the role of the pioneer and Indian fighter Simon Kenton, and Ralph Moody's *Stagecoach West.* Among biographical studies of the later 19th century, Gay Wilson Allen's *William James: A Biography* was an outstanding analysis of the distinguished philosopher and psychologist.

Books dealing with events and persons of the last 70 years have by and large emphasized wars and military problems. Charles H. Brown analyzed *The Correspondents' War: Journalists in the Spanish American War.* In *The Odyssey of Henry Ford and the Great Peace Ship,* Burnet Hershey told the full story of an odd side issue of World War I. A famous military controversy was the subject of Burke Davis' *The Billy Mitchell Affair.* Arthur H. Landis revealed the activities of American volunteers in the Spanish Civil War in *The Abraham Lincoln Brigade.* On more peaceful subjects, Donald R. McCoy presented the career of a laconic politician in *Calvin Coolidge: The Quiet President,* and William A. Swanberg studied a giant of journalism in *Pulitzer.*

World War II continues to be the subject of numerous historical works. Basil Collier produced a general study, *The Second World War: A Military History.* Several other books focused on specific battles. These included Martin Blumenson's *Kasserine Pass,* William Craig's *The Fall of Japan,* and Walter Lord's skillful reconstruction of the Battle of Midway, *Incredible Victory.* The war was also an important factor in a major autobiography, George F. Kennan's *Memoirs 1925–1950.* Kennan, who was the architect of the policy of containment, describes the frustrations he experienced in presenting unpopular but realistic views of foreign affairs to several unsympathetic administrations.

The most controversial book of the year was unquestionably William Manchester's *The Death of a President.* A thoroughly detailed, often painful reconstruction of the assassination of President John F. Kennedy, the book was published only after a prolonged and bitter legal struggle between the Kennedy family, who had originally authorized its writing, and the book's author and publisher. Although the work is valuable for its wealth of information, it is sensationalized and sometimes misleading.

Other Nonfiction. A number of interesting general works dealt with aspects of the modern scene. In *La Vida,* Oscar Lewis produced a prize-winning documentary account of what life in New York and San Juan is like for members of a poor Puerto Rican family and those associated with them. The book is distinguished by Lewis' use of tape-recorded conversations and his careful attention to detail. In many ways it reads almost like a novel, but it also raises disturbing social questions. Other books dealing with contemporary social problems are Piri Thomas' *Down These Mean Streets,* Jonathan Kozol's *Death at an Early Age: The Destruction of the Hearts and Minds of Negro Children in the Boston Public Schools,* and Hunter S. Thompson's *Hell's Angels.*

Other aspects of contemporary culture elicited controversial books: John Kenneth Galbraith continued his assault on classical economics in *The New Industrial State;* Lewis Mumford carried forward his analysis of technology in *The Myth of the Machine;* Paul Goodman evaluated American society in *Like a Conquered Province: The Moral Ambiguity of America;* and Marshall McLuhan and Quentin Fiore tried to demonstrate our changing modes of perception in *The Medium is the Massage.* A more philosophic and somber book was Eric Hoffer's unhappy look at modern America, *The Temper of Our Time.*

JOHN M. MUSTE
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AMERICAN SAMOA. See PACIFIC ISLANDS.

THE U. S. ICEBREAKER *Glacier* clears path in McMurdo Sound so that cargo ships can reach the base at Hut Point. A second Coast Guard icebreaker, the *Eastwind*, appears in the background at left.

OFFICIAL U. S. COAST GUARD PHOTO

ANTARCTICA

Several nations conducted active research in Antarctica in 1966–67. Two jet aircraft flights landed there during the winter months for the first time, demonstrating the feasibility of such flights. On March 30 the Netherlands became the fourth nation to accede to the 1959 Antarctic Treaty. Tourist cruises were again made to the northern Antarctic Peninsula by the Argentine ship *Lapataia*.

U. S. Activities. About 150 scientists took part in 46 summer field projects of the U. S. Antarctic Research Program (USARP) under the auspices of the National Science Foundation, and 250 men spent the winter on the continent. The year's largest field operation was the planned three-camp Byrd Land Survey of the coastal area from Cape Colbeck to Grant Island. In late October the first camp was established 700 miles (1,120 km) from McMurdo Station. For the next three months observations were made within the 175-mile (280-km) range of the camp's three helicopters, and Soviet exchange scientist Lev V. Flimov identified old gneiss complexes in western Byrd Land. The U. S. icebreaker *Eastwind* inspected activities at eight foreign bases in eastern Antarctica and the South Orkney Islands. There was no evidence of treaty violations, and considerable friendliness and hospitality were exhibited.

In the U. S. Geological Survey's topographic program, acceptable coverage was obtained of 335,000 square miles (867,650 sq km)—about twice that obtained in previous seasons. The 10-man American Antarctic Mountaineering Expedition included in the program reached the summit of previously unclimbed Vinson Massif (at 16,860 feet, or 5,130 meters, the highest peak in Antarctica) on Dec. 17, 1966. The climbers planted the flags of the 12 charter nations of the Antarctic Treaty at the summit.

Skuas and Adelie penguins were examined at Cape Crozier for parasite content. The distribution of mites and springtails seems to be governed by the amount of moisture in the soil. Three of the 40 penguins flown inland 1,500 miles (2,415 km) in 1964 were found at their home rookery near Mirny Station (USSR), having traveled a distance of some 3,000 miles (4,830 km). A crabeater seal was captured about 70 miles (110 km) inland and returned to the sea. For over 60 years skeletons or mummified bodies of seals have been found in dry valleys of Victoria Land, where they traveled for some unknown reason.

McMurdo. Operation Deep Freeze 67 got under way on Oct. 1, 1966, with the arrival of four Hercules LC-130F's. On November 14 a C-141 Starlifter jet transport landed at Williams Field near McMurdo with 12½ tons of cargo—a capacity twice that of the Hercules. The trip from New Zealand took only 5 hours 52 minutes and demonstrated the jet's superiority for cargo movement. Two winter flights to Williams Field (June 18 and Sept. 2, 1967) showed that such flights are possible within the boundaries of adequate safety margins. The arrival of two Hercules on Oct. 2, 1967, inaugurated Deep Freeze 68, during which 263 persons are to winter at McMurdo. Studies of microorganisms in the soil of dry valleys disclosed that bacteria increase in number with depth, but are still far fewer than in typical desert soils.

Byrd. A major project at Byrd Station was the installation of a deep-penetration drill for coring the ice cap to a depth of 7,500 feet (2,500 meters). Several breaks in the southern leg of the nearby 21-mile (34-km) wire antenna—constructed in 1965 for radio-signal studies—were repaired. The solar proton event of January 28 that blacked out communications and prevented flights in Antarctica for about 10 days provided excellent data for the upper atmosphere and magnetosphere research programs.

Palmer. Scientists at Palmer Station conducted investigations into marine productivity, the parasites of vertebrates and invertebrates, and the distribution of marine fungi. A field party continued studies of the movement and melting of the polar ice cap. Station personnel harvested their first crop of hydroponically grown lettuce—20 succulent leaves.

Plateau. Summer studies were made in glaciology, very low frequency radio signals, and the medical histories of wintering personnel. A new generator was installed and vehicles were readied for the resumption of the Queen Maud Land traverse party.

South Pole. Gravity measurements revealed that the ice sheet and station are moving horizontally toward South America at about 150 feet (45 meters) per year. The 21 men who wintered at the station included Soviet exchange scientist P. G. Astakhov.

Activities of Other Nations. A geological party from Australia spent 20 days mapping the Arena Valley. Detailed measurements are being made of the small vertical movement of the ice cap near Wilkes Station. A project is under way for drilling through the 1,000-foot-thick Amery Ice Shelf.

Roland Souchez of the Institute of Geography of Brussels, Belgium, conducted geomorphological research in the dry valleys west of McMurdo.

The 8th Japanese Antarctic Research Expedition arrived at Showa Base on Jan. 14, 1967. Unloading and construction of five new buildings proceeded along with scientific field studies.

New Zealand geologists reported that Mount Melbourne is an active volcano—the second discovered on the continent in 125 years. Several parties made biological studies in the McMurdo-Hallett area, at Cape Bird, and on the Snare Islands. Future plans call for a six-man station in Wright Valley near Lake Vanda to study dry valleys.

Olav Orheim of the Norwegian Polar Institute made studies of sastrugi (variations in snow surface) in the vicinity of Plateau Station.

In December 1966 a Hercules landed at the USSR's Vostok Station with 20 visitors from five nations, and joint upper atmospheric studies were made. On March 3 a Soviet traverse party arrived at the U. S. Plateau Station; they exchanged gifts, refueled, saw a James Bond movie, and set off the following day. Soviet scientists have invited their French colleagues to join them in making new measurements of the rate of ice movement between Mirny and Vostok Stations.

EDITH M. RONNE
Antarctic Specialist

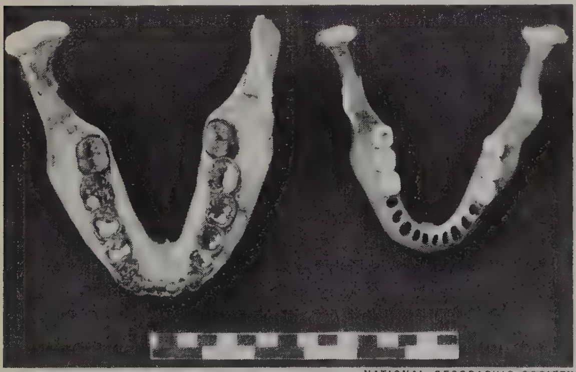
ANTHROPOLOGY

Anthropologists in 1967 continued their efforts to develop an international organization that will facilitate research in cultures undergoing rapid change. In the search for new knowledge of human evolution, attention remained focused on Olduvai Gorge and the fossil hominids of Africa (see also ARCHAEOLOGY). A field study was conducted of lemurs, and there was a comparative study of primate systems of communication. Advances were made in obsidian and carbon-14 dating techniques.

Cultural Anthropology and Ethnology. Much momentum was gained in 1967 by the international organization to stimulate and encourage research in societies undergoing rapid cultural change, and especially in those facing extinction. The Wenner-Gren Foundation and the Smithsonian Institution, which sponsored a planning conference in 1966, have also established a small grant program in urgent anthropology. A summary of the program was issued in the October 1967 *Current Anthropology.*

The modernization of traditional societies is the subject of *Contemporary Change in Traditional Societies,* edited by Julian H. Steward. The three volumes consist of research carried out by ten workers sponsored by the Studies of Cultural Regularities Project centered at the University of Illinois. The discussion of societies from Africa, Asia, Mexico, and Peru includes native tribal societies and rural segments of states. The theoretical implications of these studies are to be published in a revised edition of Steward's *Theory of Culture Change.*

A summary of George Peter Murdock's *Ethnographic Atlas* was published in the April 1967 issue of *Ethnology.* In this summary, 862 societies are organized into 412 culture clusters. There is a description of each society's geographical location, the approximate time level to which the ethnographic data pertain, an estimate of the population, and a

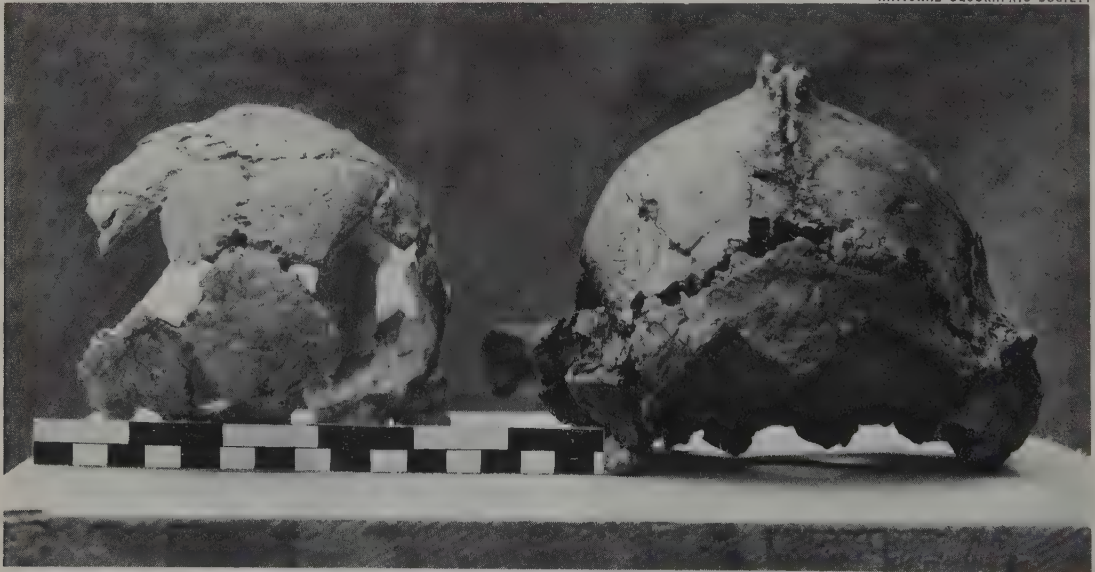


NATIONAL GEOGRAPHIC SOCIETY

(*Left*) *ZINJANTHROPUS* JAWBONE, found on a Tanzania expedition led by Richard Leakey (son of L. S. B. Leakey), is compared with jawbone of present-day man on right. Its grinding teeth are massive and differently shaped.

(*Below*) SKULL OF *ZINJANTHROPUS* (*right*), about 1.7 million years old, is compared with that of contemporary but more advanced hominid species, *Homo habilis.* As in present-day man, *habilis* skull is wider higher up than at base.

NATIONAL GEOGRAPHIC SOCIETY



reference to the pages in *Ethnology* where sources are cited. The culture clusters are coded for information on political, social, and economic organization, kinship and marriage systems, socialization practices, linguistic affiliation, and aspects of technology and material culture. Another landmark in ethnography was the publication of Franz Boas' *Kwakiutl Ethnography,* edited by Helen Codere.

Physical Anthropology. The two most important publications on human evolution in 1967 dealt with the Australopithecus discoveries in Africa. *Olduvai Gorge* (vol. 2) is a detailed description by P. V. Tobias of the most famous of the L. S. B. Leakeys' discoveries—*Australopithecus* (*Zinjanthropus*) *boisei.* W. E. LeGros Clark, in *Man-Apes or Ape-Men? The Story of Discoveries in Africa,* provides a historical summary and personal assessment of the Australopithecines and related forms from South and East Africa. In the study of primate societies, Alison Jolly's *Lemur Behavior: A Madagascar Field Study* extends man's knowledge of free-ranging primate species to *Propithecus verreauxi, Lemur catta,* and *Lemur macaco.* Stuart Altmann edited the proceedings of the 1964 (Montreal) American Association for the Advancement of Science symposium on communication and social interaction among primates.

Advances in Dating Techniques. For several years the process of hydration in obsidian—a volcanic glass used by primitive man—has been under investigation as a possible dating technique. The rate of hydration varies with the kind of obsidian and its source, and with the temperature of the ground in which the specimen was buried. By controlling these variables, a dating technique has been developed that will be valuable in checking on site chronology. The fact that all obsidian artifacts from the same site can be dated with relation to each other means that there is a built-in chronological ordering of such artifacts. Analysis of obsidian and other materials by neutron activation and spectrometry is leading to identification of the sources of materials used and the tracing of trade patterns.

In recent years the extension backward of carbon-14 dating has been increased to 55,000 years, and potentially to 70,000 years. The new estimated half-life of carbon-14 is 5,730 ± 40 years, but dates will continue to be published with the old estimate of 5,570 years. Old dates are converted to the new value by multiplying by 1.029. Refinements in the thermoluminescent dating of pottery have brought results of the technique into loose correlation with those of the radiocarbon process.

New materials found more or less satisfactory for carbon-14 dating are seashells and collagen from bones. Using tree ring dates from Douglas fir and bristlecone pine, it has been possible to chart variations in the formation of natural carbon-14 concentrations. A deviation of +13% about 5,000 years ago makes radiocarbon ages in this period about 1,000 years too young. A −9% deviation about 10,000 years ago is indicated by data derived from pollen zone boundaries, as dated by varves (alternately darker and lighter clay or silt deposits).

Annual Meetings. The 66th meeting of the American Anthropological Association was held in November in Washington, D. C. Irving Rouse succeeded Frederica de Laguna as president of the association. New areas of concern for anthropologists were represented by symposia on anthropology and war and on psychedelic anthropology. Increased concern with more complex cultures was reflected in sessions on Spain, peasant society, Japanese culture, and aspects of U. S. culture (particularly urban ghetto subcultures). Other sessions were devoted to Negroes in the New World, diseases and human evolution, markets and economics, and medicine and curing.

U. S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

RADIOCARBON STUDIES of samples are prepared by U. S. Geological Survey scientist from specimens unearthed near Mexico City. This research may help to prove that man inhabited the New World earlier than previously supposed.

At the American Association for the Advancement of Science's 134th meeting, held in December in New York City, there were three special anthropology symposia: entrepreneurship in cross-societal perspective, obsidian studies in archaeology, and anthropology's contributions to applied fields. Vice President Alexander Spoehr stressed the need to define anthropology's relationship to the national government and to work toward an international anthropology.

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Brooklyn College, City University of New York

RALPH MATTHEWS, FROM OFFICE OF ECONOMIC OPPORTUNITY

VISTA VOLUNTEER works among poor people in southern Missouri. VISTA volunteers serve in many areas of the U. S. anti-poverty program.

ANTI-POVERTY PROGRAM

In its third year of operation, the Office of Economic Opportunity (OEO) in 1967 continued its innovative and coordinated assault on poverty in the United States. Office of Economic Opportunity programs during the year included Job Corps, Neighborhood Youth Corps, Adult Work Training, Community Action, Migrant Assistance, Rural Loans, Work Experience, and Volunteers in Service to America (VISTA).

Opposition and Support. The year was highlighted by both public opposition to and support for the national war on poverty led by OEO. Republican gains in the 1966 elections strengthened congressional opposition to the administration's anti-poverty program, and urban riots during the summer of 1967 sharpened the hostility of a segment of the public.

President Johnson requested an authorization of $2.06 billion for anti-poverty measures for fiscal 1968. Although the Senate voted $2.26 billion, the poor prospects of the bill in the House of Representatives alarmed supporters of OEO, who feared that combined Republican-Southern Democratic forces would severely cripple the program.

While the outcome of the bill was still being debated, governors and mayors of both parties expressed firm support for the anti-poverty effort. When funds were still in doubt, governors, mayors, city councils, and businessmen offered their own resources to continue operating existing programs. Amendments that would have distributed the functions of OEO among other federal agencies were defeated. The House approved the bill with the largest affirmative margin (283–129) since the original enactment of the anti-poverty program in 1964.

Congress settled on a two-year extension of OEO, and $1,773,000,000 was appropriated for fiscal year 1968. This meant that the Office of Economic Opportunity could continue to operate at about the same level as the previous year.

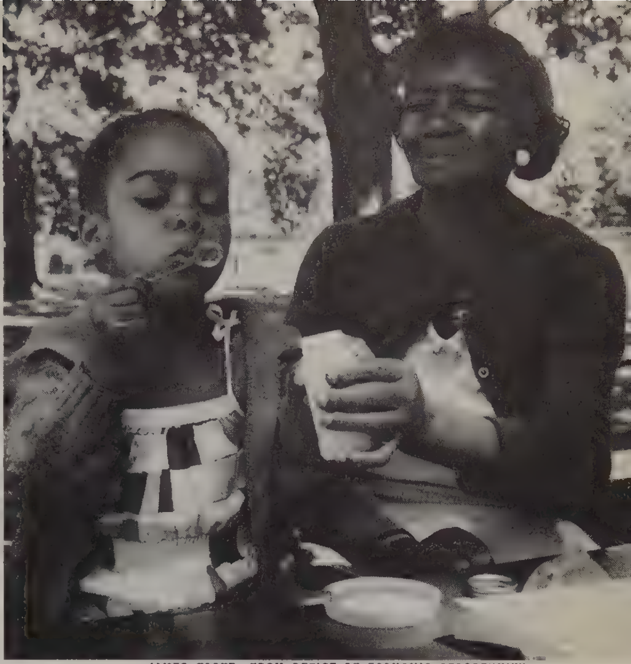
Widespread support of the war on poverty was demonstrated by the fact that national organizations contributed more than 350,000 volunteers for national anti-poverty programs. Over 2,400 Americans, young and old, volunteered for summer VISTA service. The Young Lawyers Section of the American Bar Association unanimously endorsed OEO's Legal Services Program. The American Medical Association endorsed and urged expansion and extension of OEO's Neighborhood Health Centers. American industry, including many of the nation's corporate giants, increased its involvement in OEO activities.

New Programs. During the fiscal year 1967, five new programs were inaugurated: Adult Work Training, Special Urban Employment Impact, Emergency Loan Program for Low-Income Families, Comprehensive Health Services, and Special Projects on Adult Basic Education. Fiscal 1967 also brought major program shifts—the transfer of Adult Basic Education to the Department of Health, Education, and Welfare, and of Small Business Loans to the Small Business Administration. The Economic Opportunity Amendments of 1966 placed new emphasis on OEO programs for the elderly. Consequently, OEO established its Office of Older Persons Programs in the spring of 1967.

Congress had appropriated $1.6 billion, plus a supplemental $75 million for special summer programs, for OEO in fiscal 1967.

Job Corps. For the operation of the 123 Job Corps centers, which, as of mid–1967 were providing education and training for 42,032 young men and women aged 16 through 21, $211 million was authorized. From January 1965, which marked the formal beginning of operations, through the end of June 1967, 90,000 youths had been trained by the Job Corps. Of these, 70% were placed in jobs, returned to school, or entered the armed forces.

Youth Corps. By the end of fiscal 1967, the Neighborhood Youth Corps had provided over 1,300,000 poor youths with work opportunities to help them to remain in school, return to school, or improve their chances for better employment in today's complex job market. The work opportunities were in such public or private nonprofit areas as schools, parks, and government offices. This program, which is administered by the Department of Labor for OEO, obligated $372 million and conducted over 1,400 local projects in fiscal 1967.



FOSTER GRANDPARENT and child play together at a suburban New York children's home. Foster Grandparents, partly administered by OEO, are all men and women over 60.

JAMES FOOTE, FROM OFFICE OF ECONOMIC OPPORTUNITY

Adult Work Training. Adult Work Training programs, also administered by the Department of Labor for OEO, reached more than 548,000 severely disadvantaged men and women in fiscal 1967. Community Employment and Training, which combines Operation Mainstream and New Careers, was funded at $84.5 million. For the Special Urban Employment Impact program, $24.4 million was allocated.

Foster Grandparents, which is included in the funding for Operation Mainstream, will continue to be funded and administered directly by OEO in cooperation with the Department of Health, Education, and Welfare. During fiscal 1967, there were 63 Foster Grandparents projects, funded at a cost of $5.6 million, with over 4,000 men and women 60 years of age and older participating. More than 8,000 institutionalized children at a given time received from these elder citizens a measure of love and care missing from their lives before.

Community Action. A total of $852 million in federal funds was invested in local-initiative urban and rural Community Action programs. These programs focus on manpower, housing, education, and training. Over 500 Neighborhood Multi-Service Centers brought a variety of formerly inaccessible programs directly to those in greatest need.

Community Action activities on Indian reservations were expanded in fiscal 1967. It is estimated that more than 210,000 reservation residents have been reached through the projects, which were increased from 78 at the beginning of the fiscal year to 101 by the end of the year.

Head Start, for disadvantaged preschool children, provided learning experiences, opportunities for emotional growth, and nutritional and medical care for more than 465,000 children in the 1967 summer program. Nearly 240,000 children participated in the year-round program. Fiscal 1967 Head Start projects were funded at a total federal cost of $337 million. These projects were carried out through neighborhood child development centers.

Comprehensive Health Services—preventive, diagnostic, and therapeutic—were provided for more than one million needy persons in 39 health centers in fiscal 1967. Appropriations totaled $60 million.

Through Upward Bound, over 22,000 high school students from low-income families were enrolled in 249 projects conducted in participating schools and colleges during the summer of 1967 and the ensuing school year. Upward Bound, which was begun as a demonstration project in the summer of 1965, has produced 6,000 high school graduates (or 80% of the participants) who enrolled in college.

Serving approximately 300,000 urban and rural poor in fiscal 1967 were 299 Neighborhood Legal Services Projects, funded at a total cost of $25 million.

Under its Emergency Loan Program, OEO funded 16 projects totaling $1.6 million to provide emergency loans (not to exceed $300 at a maximum of 2% interest) to persons in low-income families to meet immediate and urgent family needs.

Special Projects on Adult Basic Education, funded at a total cost of $6.3 million in fiscal 1967, provided education-supportive services to 102,000 adults to improve their employability and increase their independence.

Migrant Assistance. Grants for Aid to Migrant and Seasonal Farm Workers, funded in fiscal 1967, totaled 94. These projects, which covered 35 states, included youth education, adult literacy training, day care services, temporary housing, and permanent self-help housing.

Well over 90,000 children and adults were served by this program, for which $33 million of OEO funds was allocated.

Rural Loans. The Rural Loan program, which provides loans and management assistance to individuals and cooperative associations, is administered for OEO by the Department of Agriculture. In fiscal 1967, 16,453 individual loans and 382 cooperative loans were made, totaling $32 million for the period. Rural loans have been very nearly the sole source of aid to two of the nation's most destitute groups—the elderly rural-area dweller and the rural Negro family.

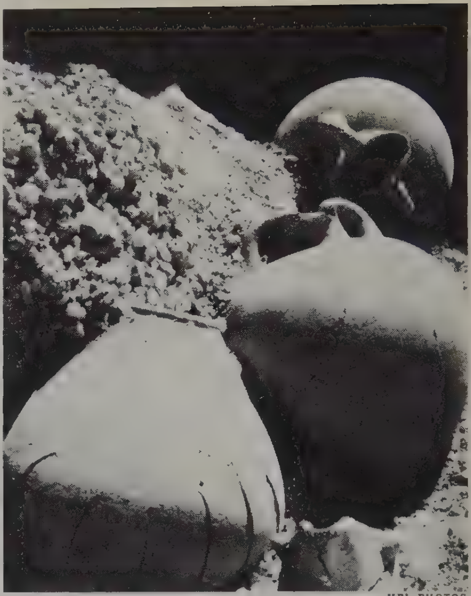
Work Experience. By the end of fiscal 1967, Work Experience, administered for OEO by the Department of Health, Education, and Welfare in cooperation with the Department of Labor, had served a total of 250,000 enrollees since its inception. Work Experience provides vocational training and a variety of family services for unemployed heads of households with children under 18 years of age. Fiscal 1967 projects, which numbered 31, were funded at $98.6 million.

Volunteers in Service to America. Volunteers in Service to America, a "domestic Peace Corps" of workers 18 years of age and older, continues to be involved in almost all OEO pursuits—Urban and Rural Community Action programs, Job Corps, Migrant Assistance, and Health Services.

By June 1967, 7,351 full-time volunteers had joined the ranks of VISTA. With a fiscal 1967 appropriation of $26,430,000, the organization swelled its ranks by 4,257 full-time volunteers and 2,063 part-time or Summer Associate volunteers and initiated or continued 412 projects.

SARGENT SHRIVER
Director, Office of Economic Opportunity

ARAB-ISRAELI WAR. See MIDDLE EAST; UNITED NATIONS; and articles on the various countries involved.



UPI PHOTOS

ANCIENT MINOAN CITY, including unbroken jars (*above*), was found in 1967 by archaeologists on the Greek island of Thíra. About 1500 B. C. a volcano destroyed the city. Some scholars link Thíra with the so-called "lost continent" of Atlantis.

ARCHAEOLOGY

Man's knowledge of his origins and development continued to be extended farther back into the past by archaeologists in 1967. Remains of ancient cities were discovered, and possible communications between a number of early cultures were examined. This article summarizes the year's archaeological research in two major sections: (1) Eastern Hemisphere and (2) Western Hemisphere.

EASTERN HEMISPHERE

Important discoveries in the Eastern Hemisphere ranged from the oldest known hominid bone to the earliest writing found in Europe.

Fossil Man. The distal end of a humerus found near Lake Victoria in Kenya has been dated at 2.5 million years old. This bone has been identified as clearly hominid in anatomical structure and function. The fragment, therefore, is almost 750,000 years older than the remains of the earliest known Australopithecine hominids.

Paleolithic Excavations in France. Publications about the Magdalenian site of Pincevent, France, near Montereau, have set new standards in the methodology and interpretation of Upper Paleolithic materials. The site, representative of an extensive reindeer-hunting culture that existed about 14,000 B. C., has provided new information on techniques for producing tools used in hunting and butchering. The uncovering of three tentlike structures that suggest the kind of Magdalenian architecture used in open-air settlements made possible a direct association of tool types with the structures.

Neolithic Cultures. Concentrated research and excavations continue to focus on the Neolithic period throughout the Eastern Hemisphere. Cultural relations between Neolithic villages in Palestine, Iraq, Syria, and Anatolia have been established through chemical analysis of obsidian tools. Such analysis suggests that the obsidian found on these sites derived from a common source in eastern Anatolia. Extensive trade contacts and cultural relations thus were already evident about 6000 B. C.

Recent important excavations at Tekkalakota, Sanganakallu, and Hallur in the southern Deccan region of India have uncovered the presence of previously unknown early Neolithic phases in India. The rich material content of all three sites—pottery, flint tools, mat impressions, numerous human burials, and substantial architecture—adds a new dimension to the understanding of human settlement in this area between 2000 and 1000 B. C. At Hallur, iron objects that date from about 1000 to 800 B. C. confirm recent evidence that iron arrived in India far earlier than the previously accepted date of 500 B. C.

The earliest Neolithic village in Europe has been discovered in Yugoslavia. The occupation of this site is believed to date back to 6000 B. C. A well-developed permanent architecture and technologically developed pottery production is in evidence at the site.

Bronze Age in Southeast Asia. Recent excavations in Thailand suggest that the traditional dating of the introduction of bronze working into this region—in the Dongson culture of 800 to 300 B. C.—is far too late. Excavations at Non Nok Tha uncovered three sandstone double molds for the production of axes, and radiocarbon dating of objects from the level above the molds suggests dates of 2325±200 and 2290±90 B. C. Thus bronze presumably was already worked at this site about 2500 B. C.

The site of Mlu Prei in northern Cambodia has exposed bronze axes identical to those that would have been produced in the molds at Non Nok Tha. Associated finds of pottery and certain architectural features suggest that this Southeast Asian Bronze Age was also in contact with cultures as far as central Europe. The evidence for such contact and for the early development of a Bronze Age in the area has resulted in a dramatic revision of the archaeologist's conception of the extent and distribution of cultures in Southeast Asia during this period of time.

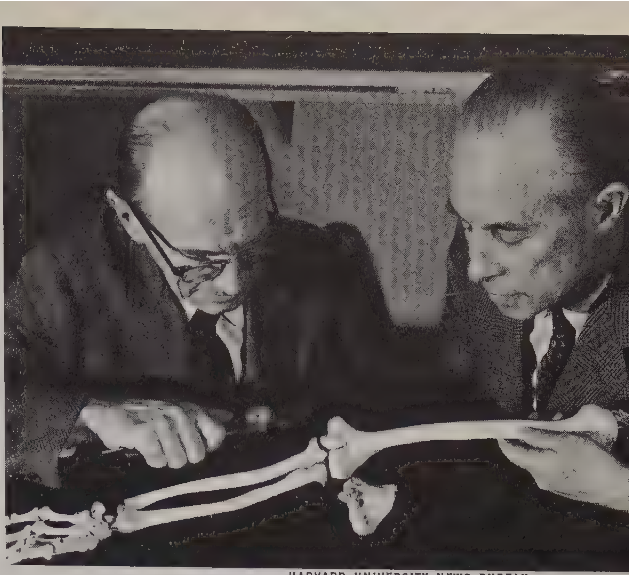
Earliest Writing in Europe. The earliest writing in Europe has been recovered from an early Neolithic pit-grave near the village of Tartaria, Rumania. The writing, on three clay tablets, is very similar to that found on the earliest tablets from the Middle East. It is assumed that the technique and idea of writing were brought by migrants from the Middle East to central Europe. Prior to this discovery the earliest known European writing—from approximately 1000 B. C.—was that of Crete; the Tartaria tablets are dated at 2900 B. C. A discrepancy exists between this date and the radiocarbon dating of cultural material associated with the tablets at 4100 B. C. The tablets nevertheless represent the earliest evidence for writing in Europe.

A New Minoan City. The discovery of an entire Minoan city buried by a volcanic eruption about 1500 B. C. on the Greek island of Thíra has suggested to some scholars that the island was part of the "lost continent" of Atlantis. Digging through many levels of ash and pumice, workers uncovered 2-story and possibly 3-story buildings in an excellent state of preservation. The standing walls of some of the buildings had brilliantly colored frescoes preserved on their surface. The absence of human skeletons and of precious objects indicates that the inhabitants had sufficient warning to flee the city before the eruption.

The site of the digging covered more than half a square mile (about 1.3 sq km). The discovery of this city, which with its excellent preservation is one of the most important finds in Aegean archaeology in years, is expected to provide new insights into the daily life of Minoan civilization and into the sudden collapse of Minoan power.

Middle Assyrian Finds in Iraq. The discovery of a Middle Assyrian merchant's archive, as well as of new architectural information about temple and ziggurat construction, is a major contribution stemming from the excavation at Tell al Rimah, Iraq. The facades of the temple and the ziggurat are decorated by more than 270 half-columns, of which 50 were modeled after a palm tree trunk. Only one other palm trunk column of mud brick is known, and that is from the bastion of Warad-Sin at Ur, about 1830 B. C.

The merchant's archive contained a number of important tablets dating from the reign of Tukulti-Ninurta I (about 1235–1199 B. C.) of Assyria, showing that the final abandonment of the site took place toward the end of the 13th century B. C. Excavations also have uncovered important economic texts, Assyrian architectural features, and works of art of the Middle Assyrian period in Iraq.



HARVARD UNIVERSITY NEWS BUREAU

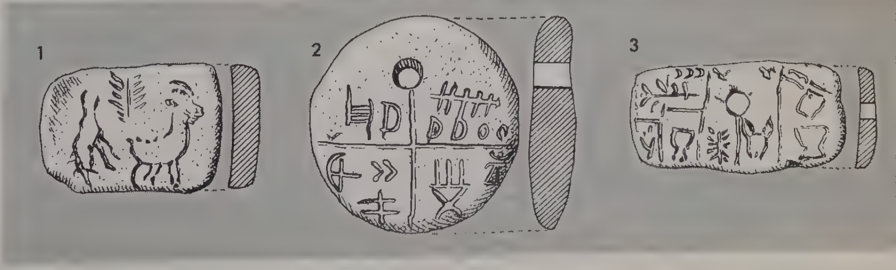
DISCOVERY of an elbow bone fragment (shown with arm skeleton of modern man) of a manlike creature 2.5 million years old was announced in 1967 by Bryan Patterson (*left*).

Glass Manufacture at Bet She'arim. This ancient necropolis, 12 miles (19.3 km) southeast of Haifa, Israel, lies in an area known to have been a glass-making region during the Roman period. A large buried slab was encountered in a cistern adjacent to some of the catacombs at the site. Analytic examination of the slab proved beyond doubt that it is glass. The slab is 11.1 by 6.4 feet (3.4 by 1.9 meters) and about 20 inches (50 cm) thick, and weighs about 8.8 tons (9.7 metric tons). It is by far the largest single piece of glass known from ancient times. Excavations around the slab suggest a date somewhere between 300 and 700 A. D. The engineering skills needed to construct a furnace capable of containing 11 tons of raw material and heating it to a temperature in excess of 1832° F (1000° C) for several days represent technological abilities that were unsuspected for this period.

Excavations in Sierra Leone. Considerable expansion in the archaeology of Africa has taken place in the past few years. Excavations at Yangema Cave in Sierra Leone have yielded one of the earliest and most extensive assemblages of prehistoric materials in western Africa. An early period had a dolerite, quartz, and schist industry of tools and weapons, and a later period used pottery and had a developed stone industry. The pottery is coarse and decorated entirely by punctuation of the material. The dates of the site are estimated at somewhere between 2000 and 1600 B. C.

C. C. Lamberg-Karlovsky
Peabody Museum, Harvard University

LONDON TIMES



CLAY TABLETS found in Rumania have been determined to contain a form of writing older than any other European writing. Radiocarbon data suggest the tablets may be 4,000 years old, thus predating Sumerian writing.

WESTERN HEMISPHERE

North American archaeology in 1967 was hampered over much of the United States by unusually heavy and continued precipitation that caused flooding of excavations and loss of working time. More serious was the cut in federal funds allocated for salvage archaeology. On the credit side was the increase in the number of technical reports issued or awaiting publication during the year.

Michigan. Work carried on at the Mikado earthworks—one of the largest in Michigan, and considered to be of late prehistoric age—uncovered a total of 1,825 square feet (169.5 sq meters). The encircling wall was cut in four places to determine the palisade pattern of the wall. Refuse pits, hearths, and a house pattern were also uncovered. Lithic and ceramic materials were scarce, but workers found charred corn, corn cobs, beans, and seeds.

In Chippewa county, Mich., excavations carried out on Naomikong Point suggest that it may be one of the most important sites in the upper Great Lakes region. Early results show stratigraphic evidence of the occupation of the site from the Middle Woodland period down to historic times.

Kentucky. Excavation at Savage Cave in Logan county, Ky., concentrated on the levels containing Late Archaic and Early Woodland cultural remains. Higher levels at the site have yielded material that permits their assignment to Historic and Late Woodland cultures. Objects eroded from the lower levels at the mouth of the cave indicate that occupation began in the Paleo-Indian period.

Kansas. Work was continued in central Kansas at sites attributed to the ancestral Wichita culture of about 1600 A. D. Each of the two sites under investigation showed the presence of a complex of long curved structures arranged in a tight circle. The two circles (and another excavated in 1965) are on a line oriented to the rising and setting sun at the winter and summer solstices.

Evidence of contacts between Plains and Pueblo Indians is seen in a turquoise pendant found at one site, and the small amounts of metal and of glass beads recovered probably came through the same source. Data on the burial pattern of the Wichita group were obtained. Finds of corn, beans, and pumpkin or squash seeds, combined with the presence of many scapula hoes, furnish evidence of a subsistence economy based on agriculture as well as hunting.

Arizona. Archaeologists from Prescott College, Arizona, conducted a survey of a previously inaccessible part of the Grand Canyon area by helicopter. Sites were located from the air, and landings were made at most of them. Some 250 ruins were located, at least 200 of which were new to the scientific record. These include some Southern Paiute and Havasupai sites dating from later than 1150 A. D. and a majority of early Pueblo III Kayenta Anasazi structures probably dating between 1100 and 1150 A. D.

New Mexico. Excavations by the University of New Mexico at the Rio Rancho site on the western outskirts of Albuquerque have proved the site to be Classic Folsom. It is reported to be more extensive and to have yielded more material than the Lindenmeier site in Colorado.

At Zuñi Pueblo excavations were made preparatory to restoring the old Zuñi Mission. The nave, baptistry, and original foundations of the church and convents were uncovered. Complete restoration plans are being prepared for the mission, which dates from the early 18th century.

Mexico. A project whose members included specialists in history, archaeology, and physical anthropology from Mexico and the United States was initiated to conduct excavations in Magdalena, Sonora. Its purpose was to discover the remains of Eusebio Kino (1645–1711), a pioneer Jesuit missionary. After extensive research and excavation the remains of Padre Kino and other individuals were found and preserved.

The second season of extensive archaeological investigations at the site of San Lorenzo Tenochtitlán, on the Río Chiquito in the state of Veracruz, has uncovered numerous Olmec stone monuments of great artistic value. Radiocarbon dates and associated materials put all monuments in a single Early Pre-Classic Culture called San Lorenzo, dating from 1200 to 900 B. C.

Peru. An archaeological reconnaissance has been carried out at various localities in the Peruvian highlands between Cuzco and the Ecuadorian border to locate dry caves containing plant remains associated with occupational debris. Small collections made at 16 caves in the south central highlands suggest that man was already living in the area by 8500 B. C. Plans are being made for an archaeological-botanical investigation of the region.

Excavations at late preceramic sites on the central Peruvian coast promise to clarify the sequence of cultural units in the period from about 3500 to 1800 B. C., and to shed light on changes in the economic pattern resulting from the appearance of domestic plants in the area. Preliminary studies show that beans, gourds, and squash are common in the earlier sites but tend to disappear later, and that fishing becomes less important after the appearance of domesticated plants.

Chile. Work in the vicinity of Salar de Talabre, a dry lake basin dating from the end of the Pleistocene, has allowed two major complexes to be isolated. The earliest, called the Chuqui, comes from eight sites located on high terraces said to date to a period of glacial advance in the Andes, contemporary with the Mankato or Port Huron glaciation in North America. Tools of the complex include burins (flints with beveled points), keeled denticulate (toothed) implements, and psuedo burins.

Argentina. Archaeologically, one of the least known portions of Argentina is that of the northeast. A 3-year program designed to remedy this situation began in 1966. In 1967 five parties undertook a systematic survey along the principal rivers, making surface collections and stratigraphic tests in order to construct a serially arranged sequence of cultures.

Brazil. Many lithic sites are under investigation in the state of São Paulo. Preliminary analysis of the crudely chipped tools suggests that several cultural complexes are involved. The superficial nature of the sites and the absence of associated material for radiocarbon dating have hampered construction of a chronological sequence. Meanwhile an international program of archaeological research successfully completed the second year of a 5-year program and is developing culture sequences from Paleo-Indian sites to historic sites with pottery in the Tupi-Guaraní tradition.

George Metcalf
Smithsonian Institution

ARCHERY. See Sports.

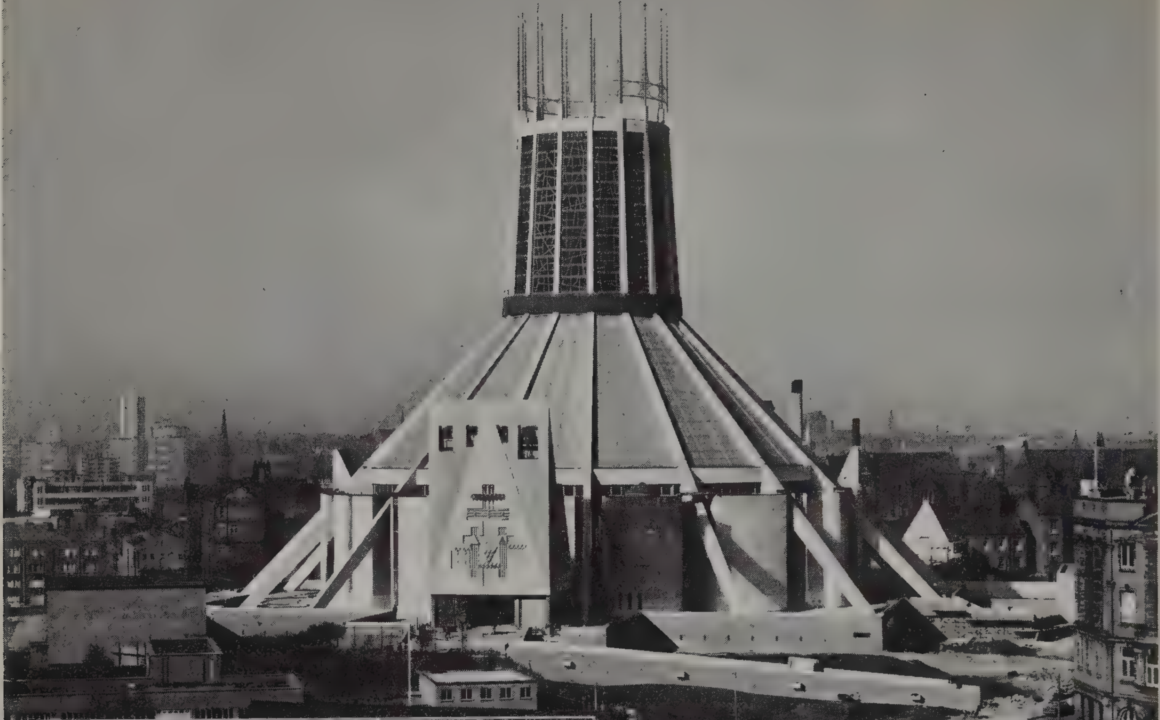
ARCHITECTURE

HOTEL LOBBY becomes a courtyard garden for every guest at the Regency Hyatt House in Atlanta. View is from a 17th floor gallery.

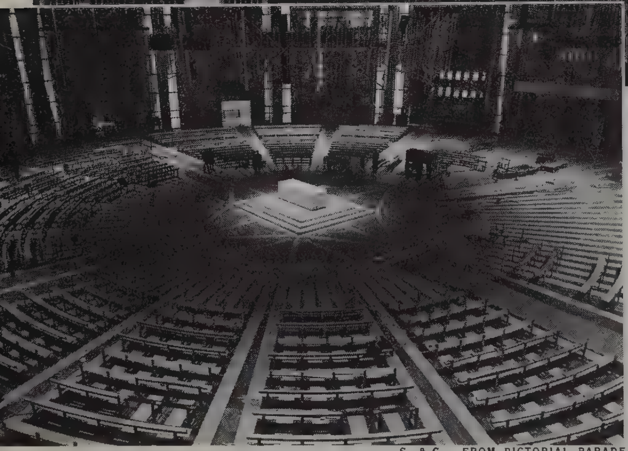
ARCHITECTURE

The many different directions in which architecture is headed were apparent in the major architectural projects of 1967. American architects sought reference points for their work in such various sources as the giant rocket-launching structures at Cape Kennedy, with their impressive use of technology, or in the offshore drilling rigs in the Gulf of Mexico—for their visual impact focusing the idea of independent, technologically oriented communities. Other architects were pursuing esoterically argued versions of "Op" or "Pop" architecture.

Expo 67. The main architectural event of the year was Expo 67 in Montreal, Canada, built on two islands and a peninsula in the St. Lawrence River. Designers of Expo faced many of the major problems current in city planning—for example, the necessity of moving large numbers of people. This was adroitly solved through the use of public transit and automated trains that carried visitors around all the pavilions, and through the glistening U. S. pavilion, a 250-foot-diameter geodesic structure of aluminum tube and acrylic panels, designed by R. Buckminster Fuller to be converted into an aviary after the fair closed. Its appearance changed through responding to changing sun conditions by means of electronically operated blinds within each panel. Designed by the Cambridge Seven Associates, the interior was a series of elevated platforms.



JOHN MILLS, FROM PIX



S. & G., FROM PICTORIAL PARADE

RADICAL CHURCH DESIGN characterizes the new Roman Catholic cathedral consecrated on May 14 in Liverpool, England. The open bell tower (above entrance), 112-feet feet high, is embellished with abstract sculpture. The interior space (*left*) is centered on a starkly simple altar.

Among the more impressive smaller pavilions were Quebec, with its façades of reflecting mirror glass, and Cuba, an elegant steel structure designed to be dismantled and returned to Cuba for use as a school. The West German exhibit was housed under a suspended-cable roof, covered with plastic sheet. It was a prototypical form for tension structures developed over many years by the German architect Frei Otto.

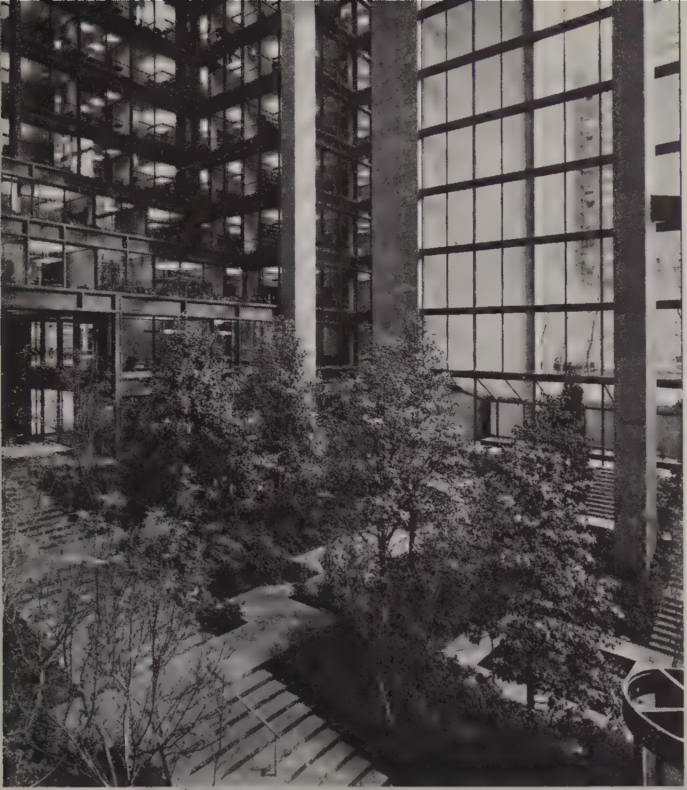
At the water's edge was one of the most exciting of the permanent structures of Expo 67, a group of 158 apartments, called Habitat 67, designed by the young Israeli architect Moshe Safdie. The apartments are 80-ton, prefabricated concrete boxes stacked in a stepped, ziggurat form reminiscent of Mediterranean hill towns. The one- and two-story apartments have large terraces, and are accessible by open "streets in the sky," which, with their plexiglass windbreakers, offer open spaces with views of the skyline. The shortcomings of Habitat 67, arising from its random form, were a lack of privacy and structural inefficiency. (See also EXPO 67.)

Major Architectural Projects. Two foreign architects who received major commissions for work in the United States in 1967 were James Stirling, an English architect in charge of the master plan for renewal of a section of the West Side of Manhattan, and the Finnish architect Alvar Aalto, who was commissioned to design a library for Mount Angel Benedictine College, in Oregon. Aalto's design utilizes his characteristically organic forms in a semicircular fan-shaped library set against a rectangular building containing offices and the lobby.

U. S. architects working on major projects abroad include Louis I. Kahn, who designed the Assembly building for Islamabad, the new capital city of Pakistan. The design is distinguished by a masterful articulation of natural light. Kahn's building for the Indian Institute of Management, in Ahmedabad, India, might have tempted a lesser architect to import a Westernized aesthetic; instead Kahn demonstrated his architectural sense of technology by using the local brick in highly sophisticated forms entirely appropriate to the country.

Mies van der Rohe completed a 60-story office building for the Dominion Bank of Canada, in Toronto, with a dark curtain wall and an open ground floor plaza. He was also scheduled to design a similar structure in the historic center of London.

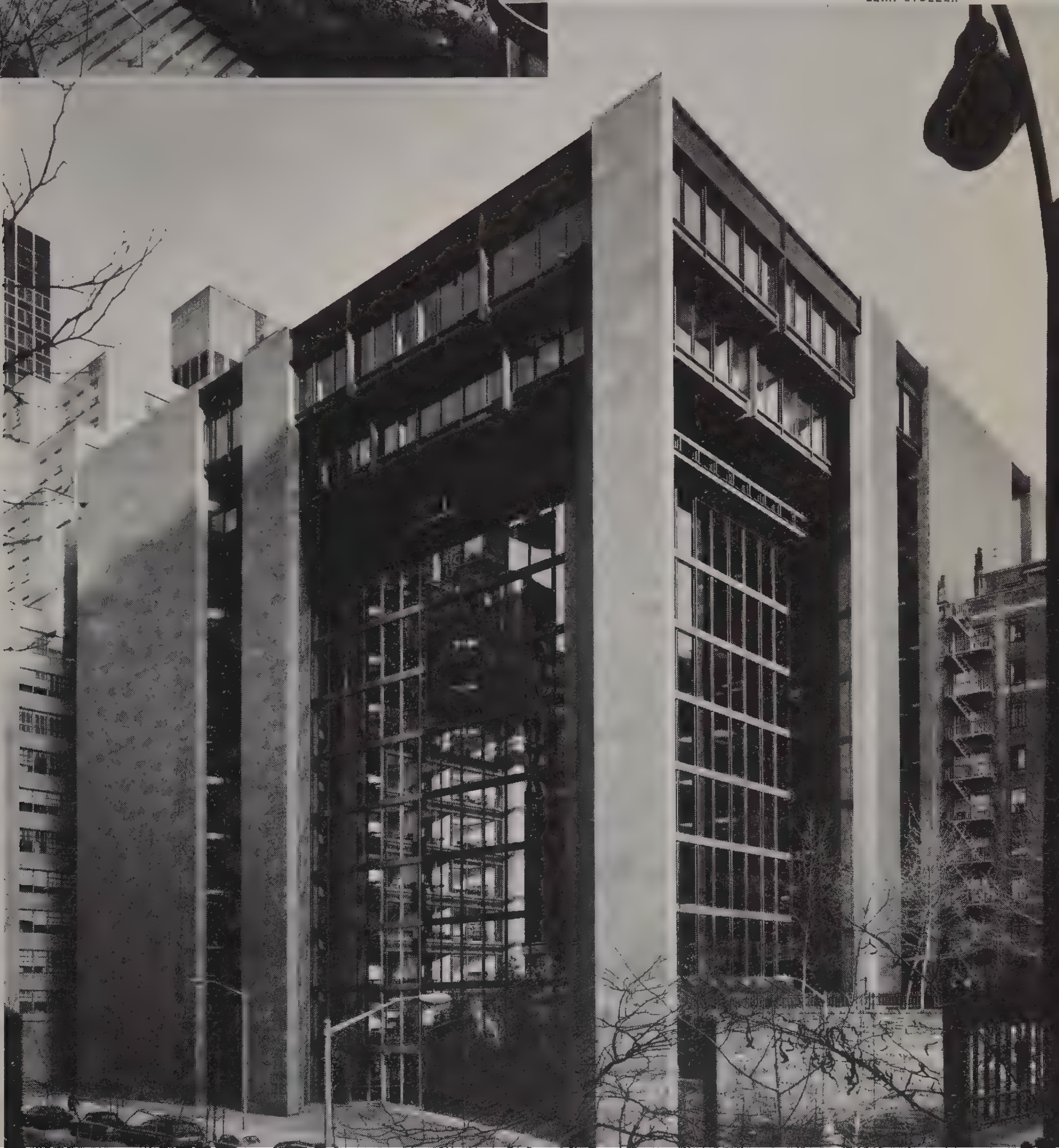
The Metropolitan Cathedral of Christ the King was inaugurated in Liverpool, England, in 1967. The commission for the design was won in competition by Frederick Gibberd in 1960, and consists



THE FORD FOUNDATION'S new offices on East 42d Street in New York City overlook a garden (*left*) growing within the building's walls. Garden is enclosed on two sides by L-shaped office wings and on two sides by 10-story glass curtain walls (seen in exterior view below). Kevin Roche, John Dinkeloo and Associates designed the structure.

EZRA STOLLER

EZRA STOLLER



EDWARD DURELL STONE'S plantation house inspiration for the new Museo de Arte de Ponce, at Ponce, Puerto Rico, won American Institute of Architects Honor Award.

of a circular drum with a central altar lit from a stained glass lantern rising 235 feet above the floor. The building is supported by radially disposed boomerang-shaped supports, suggestive of flying buttresses, that define 16 free-standing chapels.

Two major auditorium facilities were opened in the United States during the year, the Jesse Jones Hall for the Performing Arts in Houston, Texas, and the Charles Center Theater in Baltimore. The Jesse Jones Hall, by the architects Caudill, Rowlett and Scott and the theater designer George Izenour, is the first auditorium that can be physically and acoustically changed by means of a movable, tunable ceiling from a 3,000 seat-house to an 1,800-seat house. The project received an American Institute of Architects (AIA) Honor Award. The Charles Center Theater, by John Johansens, in the heart of Baltimore's new development, is a vigorously expressive, exposed concrete form superimposed on a ground floor podium designed for stores.

The year 1967 gave hope for improvement in the architecture of official Washington, D. C. Roche and Dinkeloo, in collaboration with Charles Eames, planned a new structure for the National Fisheries Center and Aquarium. It consists of a raised 432-foot-square platform containing exhibition rooms and two auditoriums. Rising from one corner is a 100-foot-high semicircular glass enclosure covering a re-creation of a section of the Florida Everglades.

Also in Washington, Victor Lundy's somber granite and dark glass United States Tax Court Building was presented in 1967. It has a strongly cubic and symmetrical composition, with courtrooms in a long block that appears to be suspended two stories above a podium and generous entrance steps by means of a 55-foot cantilever.

As a fitting postscript to his work, a pavilion designed by Le Corbusier to house a permanent exhibition of his own drawings and lithographs was opened in Zurich, Switzerland. It consists of two saddle-shaped metal roofs enclosing exhibition areas defined by panels of glass and brilliant enameled metal panels.

The laboratories for the Bell Telephone Company in Trenton, N. J., was one of the last buildings designed by Eero Saarinen and perhaps his best. Saarinen gave the site plan the formality of Versailles; the enormous one-way mirror façade reflects the landscape. The building is comprised of two functional laboratory blocks placed back-to-back; between them is an enormous, planted, skylit reception court.

Another laboratory facility—the National Center for Atmospheric Research by I. M. Pei—is sited on a high mesa at the edge of the Rocky Mountains near Denver, Colo. The building's complex plan deftly separates the conflicting requirements of exhibition space and laboratory space in a strongly monolithic, red concrete structure with shielded openings that minimize the effect of high winds and strong light.

The University of California's campus at Santa Cruz will be one of the largest in the country, accommodating 27,500 students. Its master plan, by John Carl Warnecke, calls for a division of the heavily wooded, ravined, 2,000-acre campus into 15 or 20 residential liberal arts colleges. The first college, completed in 1967, was designed by Joseph Esherick, utilizing the indigenous vocabulary of stucco and single-pitch clay-tile roofs in a series of three-storied structures, clustered irregularly.

In New Haven, Conn., Roche and Dinkeloo organized 1,600 students into four "houses" in their Richard C. Lee High School. The classroom level is a dramatically articulated, cantilevered concrete structure, set over a ground floor that accommodates the cafeteria, assembly hall, and workshops. Gunnar Birkert's design for the Lincoln Elementary School in Columbus, Ind., is equally forceful. It is circled

EZRA STOLLER

by thick trees; from the front only the formal entrance steps and dense greenery are visible.

Paul Rudolph made his new Creative Arts Center for Colgate University, Hamilton, N. Y., into a gateway for the campus by elevating the studio accommodations on three-story columns.

The new Museum overlooking Lake Merritt in Oakland, Calif., by Roche and Dinkeloo, creates a verdant open space out of the terraced roofs of the gallery spaces. The same architects designed the 12-story office building for the Ford Foundation in New York City of granite and Cor-ten rusting steel. It is L-shaped in plan with a 100-foot-square skylit garden enclosed by 10-story-high glass walls.

Prizes and Awards. Twenty projects were selected in 1967 for the American Institute of Architects (AIA) Honor Awards. Five of the projects were designed by Skidmore, Owings and Merrill. They are the seven-story American Republic Insurance Company headquarters in Des Moines, Iowa, a long-span concrete structure; the Beinecke Rare Book Manuscript Library at Yale University, suggestive of an alabaster-filled concrete casket set on four columns; the Banque Lambert Office Building and residence in Brussels, Belgium, an elegant precast-concrete structural system with richly detailed and furnished interiors; the utilitarian, concrete Vannevar Bush Center at Massachusetts Institute of Technology, Cambridge, Mass.; and the Mauna Kea Beach Hotel in Hawaii, a stepped form that is evocative of Le Corbusier's Palace of Justice in Algiers.

Another AIA Honor Award went to Moore, Lyndon, Turnbull, and Whitaker, for the design of Sea Ranch, a three-hour drive north of San Francisco. A compact compound of condominium vacation apartments, it is sited overlooking the Pacific Ocean. (See also PRIZES AND AWARDS.)

JOHN FOWLER
Yale University School of Architecture

ARCTIC REGIONS

The geology, subsurface features, ice masses, ocean water, atmosphere, plants, and animals of the Arctic regions continued to be studied actively in 1967. Economic motives were behind some of these investigations, as was military interest in this strategic area. In addition, certain fundamental questions of meteorology and climatology can be studied only in the Arctic. An example is the basic problem of changes in the earth's climate and how they are produced. According to some theories, the Arctic Ocean is a key factor in producing such changes; hence, evidence in support of these theories must be sought in the Arctic regions.

Settlement and exploitation of the Arctic have proceeded along with exploration. Southwest Greenland is one of the most highly developed Arctic regions; a relative prosperity has been brought about in recent years by commercial fishing. Most northern regions have not reached this kind of development, however, and they remain poor by modern standards of industrial civilization. U. S. and Canadian companies have searched for oil and minerals at an increasing tempo in recent years. This search can be expected to increase as other sources are depleted.

United States. The Arctic Research Laboratory at Barrow, Alaska—the northernmost U. S. town—continues to be the main base for scientific research in northern Alaska and the Arctic Ocean region. A broad program of biological, geophysical, geological, and social science research is conducted there by visiting investigators. Fletcher's Ice Island (T-3), a center for research, is supplied by aircraft from the laboratory. The island is a floating ice mass about 4 by 7 miles (6 by 11 km) in size, with a thickness of about 100 feet (30 meters). Scientists on the floating station conduct research on many aspects of the polar environment.

Canada. Much of Canada's research effort in the far north is under the guidance of government surveys and of the Polar Continental Shelf Project. The project continues its extensive program in the Canadian Arctic archipelago. Field parties from various institutions also avail themselves of the facilities provided on Devon Island by the Arctic Institute of North America.

An attempt (led by an American) to reach the North Pole by motorized sleds was initiated on March 28, 1967. The attempt failed; the party turned back after traveling about 265 miles (427 km) from a base camp in Eureka on Ellesmere Island. The pole has not been reached by a surface party since Admiral Peary's expedition of 1909.

USSR. Research by the Soviet Union in Arctic regions is commensurate with its large extent of land and coastline north of the Arctic Circle. For example, the USSR pioneered in the use of drifting ice stations in the Arctic Ocean and continues to maintain two of these stations. In 1967 the USSR offered to make its northern sea route open to all nations. (The route, extending 2,500 miles [4,025 km] over northern Europe and Asia, is kept open 150 days a year by icebreakers.) However, the USSR denied passage through Vilkitski Strait in August to two U. S. icebreakers attempting to circumnavigate the North Pole; the Soviets claimed that this would be a violation of territorial waters.

KENNETH L. HUNKINS
Lamont Geological Observatory

UPI

FLOODS, after eight days of almost continual rainfall in early October, caused many deaths and forced the evacuation of more than 40,000 in the Buenos Aires area.

ARGENTINA

The political crisis that began in Argentina in 1966, when the armed forces seized power from President Arturo U. Illia and named Lt. Gen. Juan Carlos Onganía his successor, continued throughout 1967. Although there were civilians in the cabinet and other important government posts, the Onganía government continued to be a military dictatorship.

Trends in the Regime. The regime continued to proclaim, as it had done from the beginning, that it intended to stay in office for 10 years and that it would bring about fundamental changes in the national economy and in society. However, it neither developed any very clear sense of direction during 1967 nor gave definite evidence of the nature of the revolutionary changes that it sought to achieve.

Although there was a tendency for the government to harden politically, it remained fundamentally split. One faction, which was of a right-wing nationalistic tendency, included some groups of hangers-on that were definitely anti-Semitic. The other faction was made up of self-proclaimed "liberals." Their liberalism was confined principally to economics, where they advocated the extension of free enterprise, but there was little indication that they were strong advocates of political liberalism and a return to constitutional government.

Gen. Julio Alsogaray, the army commander in chief, gave evidence of being the principal representative of the liberals in the military high command during 1967. The liberals' chief civilian spokesman was Adalberto Krieger Vasena, who became minister of economy on January 4. In the cabinet reorganization that took Vasena into office, Gen. Pascual A. Pistarini, generally considered a military leader of the more intransigent element in the government, was replaced as minister of defense by Gen. Antonio Lanusse.

When leaders of the old political parties, which had been outlawed after the military takeover in 1966, began to demand that the government take steps for calling new elections, President Onganía brought them up short. In a speech on May 26 he conceded that sooner or later elections would be held but indicated that discussion of the matter was premature.

The Regime and Labor. During its first months the Onganía government had sought to gain the friendship of the Peronists (supporters of Juan D. Perón, president of Argentina in 1946–55) or at least to obtain their neutrality, but such efforts were abandoned during 1967. In February the National Security Council cut all ties with Peronist-dominated labor, particularly the CGT (General Confederation of Labor). It froze the bank deposits of a number of key unions.

The previously powerful and militant labor movement showed almost no reaction to this drastic move by the government, which was followed by enactment on March 4 of a "civil defense" law. This law gave the government the right to draft all residents over 14 years of age whenever the "vital interests" of the state are threatened and to exercise this power even when a state of war does not exist.

Although unable to retaliate effectively, the CGT announced on August 28 that it no longer recognized the authority of the government because Onganía

ARGENTINA • Information Highlights

SOUTH AMERICA
AFRICA

Area: 1,072,067 square miles (2,776,656 sq km).
Population: 22,691,000 (July 1, 1966, est.)
Chief Cities (1960 census): Buenos Aires, the capital, 2,966,816; Rosario, 671,852; Córdoba, 589,153.
Government: *President*—Lt. Gen. Juan Carlos Onganía (took office June 29, 1966). *Parliament*—(suspended by military junta June 29, 1966).
Religious Faiths: Roman Catholics, 88% of population.
Education: *Literacy rate* (1960), 91.4% of population aged 14 and over. *Total school enrollment* (1964)—4,048,296 (primary, 3,073,752; secondary, 170,824; teacher-training, 172,632; technical, 405,435; university/higher, 225,653).
Finance (1965 est.): *Revenues,* $1,527,000,000; *expenditures,* $2,047,000,000; *monetary unit,* peso (350 pesos equal U.S.$1).
Gross National Product (1966): $12,011,100,000.
Economic Indexes (1965): *Industrial production,* 120 (1958=100); *agricultural production,* 123 (1956–57=100); *cost of living* (1966), 1,020 (1958=100).
Manufacturing (metric tons, 1966): Residual fuel oil (1965), 7,990,000; cement, 3,492,000; meat, 3,217,206; gasoline (1965), 3,200,000; wheat flour, 2,160,000; crude steel, 1,266,000; sugar, 1,039,000.
Crops (metric tons, 1966–67 crop year): Maize, 9,054,000; wheat, 6,380,000; grapes, 2,625,000; sorghum, 1,618,000; potatoes, 1,484,000; sunflower seed, 864,000.
Minerals (metric tons, 1966): Crude petroleum, 15,000,000; natural gas, 128,368,800,000 cubic feet; bituminous coal, 472,800; iron ore, 116,400; zinc, 26,040; tin, 1,030.
Foreign Trade (1966): *Exports,* $1,593,200,000 (chief exports: meat, $397,100,000; wheat, $279,600,000; maize, 1965, $153,700,000; wool, $127,700,000); *imports,* $1,124,300,000 (chief imports, 1965: iron and steel, $176,200,000; nonelectrical machinery, $133,000,000; transport equipment, $122,500,000). *Chief trading partners* (1965): United States (took 6% of exports, supplied 23% of imports; Brazil (took 8% of exports, supplied 13% of imports).
Transportation: *Roads* (1965), 84,008 miles (135,194 km); *motor vehicles* (1965), 1,542,400 (automobiles, 920,000); *railways* (1965), 27,169 miles (43,470 km); *merchant vessels* (1966), 158 (1,096,000 gross registered tons); *state airline,* Aerolíneas Argentinas; *principal airports,* Bahía Blanca, Buenos Aires, Córdoba.
Communications: *Telephones* (1966): 1,497,841; *television stations* (1965), 14; *television sets* (1965), 1,600,000; *radios* (1964), 6,200,000; *newspapers* (1965), 171.

JUAN CARLOS ONGANÍA, president of Argentina, was installed on June 29, 1966, by the 3-man military junta that had overthrown President Arturo U. Illia. Upon taking office, Onganía dissolved the legislature, banned political parties, curbed the national universities, and generally curtailed civil liberties. In 1967, after reorganizing his cabinet to meet demands of the military, he instituted an austerity program, announced strict fiscal reforms, and curbed the main trade unions and union leaders. In August he signed a law severely restricting the activities of suspected Communists.

Onganía was born on a small farm in Buenos Aires province on March 17, 1917. Educated in Argentina's School of War, he served in the cavalry and the armored corps, rose steadily through the military ranks, and acquired a reputation for efficiency and discipline. Within the armed forces he was known as a moderate Peronist, but he generally avoided political controversy. Appointed commander in chief of the army in 1963, he resigned in 1965.

WIDE WORLD

was not a constitutional president. He replied that the CGT did not represent the organized workers.

Economic Policy. That the liberals were dominant during most of 1967 was evident in the liberal economic policy that the government followed. One of the main elements of this policy was an attempt to rehabilitate the country's two major export industries—livestock raising and grain growing.

A major step toward rebuilding the livestock industry was the launching in Buenos Aires province, in July, of a $39 million program to increase beef production through granting extensive low-interest loans to ranchers to improve pasture, buy machinery, and fence their land. Reorganization and strengthening of the grain economy were furthered by a $35.4 million program to improve the storage and handling of wheat and other grains in the country's chief grain-exporting ports. It was hoped that by 1970 the grain-exporting capacity would be doubled.

These programs—which were aided, respectively, by loans from the International Bank for Reconstruction and Development and the Inter-American Development Bank—were complemented by a decree granting tax reductions to farmers who would purchase breeding cattle and hogs, employ additional technicians, and invest in locally produced agricultural machinery and equipment.

A second major aspect of the government's economic program was the devaluing of the Argentine peso to encourage foreign investment and make the country's exports more attractive. On March 13 the peso was devalued by 40% (350 pesos to the dollar).

A third element of the economic policy was the rescheduling of the country's foreign debt to stabilize the peso and increase the currency reserves of the central bank. Intensive negotiations were conducted with creditors in Europe, in the United States, and elsewhere to convert short-term debts, which come due within a matter of months, into longer-term obligations. By early May, $400 million had been so converted.

Finally, the government turned its attention to the oil industry problem. Between 1958 and 1962, President Arturo Frondizi had negotiated agreements with foreign oil companies allowing them to participate in exploitation of national oil reserves. President Illia had canceled those agreements in 1963, with the result that by 1966 Argentina was again a major importer of petroleum products—a position from which Frondizi had retrieved it.

As a first step in dealing with the problem, the Onganía government reached a final agreement on April 9, 1967, with two U.S. oil companies—Cities Service Company and Pan American Argentina (a Standard Oil of Indiana subsidiary)—whereby those companies would be permitted to resume operations under most of the conditions agreed to under Frondizi. A second step was taken on June 22, when President Onganía signed a new law permitting foreign oil companies to engage again in exploration and production of petroleum under concession.

Perhaps in part as a result of these measures, the economic situation of Argentina improved somewhat during the year. The stock market rose, the rate of inflation slowed, and the international value of the peso was more or less stabilized.

Restrictions on Civil Liberties. After enacting the civil defense law in March, the regime moved to restrict civil liberties further. An anti-Communist law, signed on August 25, defined a Communist as "one who carries out activities that are proved to be undoubtedly motivated by Communist ideology." Any such person is to be banned from holding public office; becoming a citizen or being a teacher; administering radio, television, or publishing enterprises; and holding office in unions or in professional organizations. The law set penalties of one to eight years in prison and made no provision for appeal. Although no large-scale attempt was made to apply the anti-Communist law during 1967, there were prosecutions in several provinces of relatively unknown figures.

Repression of the national universities began in July 1966, when a decree stripped them of their autonomy and placed them under the minister of education. Soon afterward, many leading faculty members resigned, and a large number of them found jobs abroad during 1967. The fact that members of physical science departments went abroad in particularly large numbers may mean a permanent loss of intellectual resources.

A new law for governing the universities was announced on April 22, 1967. It deprived students and alumni of their votes in university governing bodies and ended the traditional sanctuary that had existed on university campuses.

International Affairs. On January 5 the government issued a decree extending Argentina's offshore boundaries from 3 miles (5 km) to 200 miles (322 km). The extension was aimed at curtailing the activities of foreign fishing fleets.

Between February 15 and 26, Buenos Aires was host to the Third Inter-American Conference of the Organization of American States and, concurrently, the meeting of OAS foreign ministers. The latter prepared the agenda for the April meeting of American presidents at Punta del Este, Uruguay, which was attended by President Onganía. (See also Latin America.)

Robert J. Alexander
Rutgers—The State University

WIDE WORLD

DEMOCRATIC SENATOR Carl Hayden of Arizona, who has been a senator for 40 years, slices a cake at a celebration in Washington on his 90th birthday, Oct. 2, 1967.

ARIZONA

During the shortest session in the state's history, the Arizona legislature in 1967 passed an impressive total of 135 bills. The legislature (the first to be controlled by Republicans) met for 64 days—from January 9 to March 31—in regular session, as well as in three separate special sessions.

Legislation. The legislature was in a reform mood. It established a new state department of property valuation; created a centralized purchasing agency within the department of finance; drew up a code of ethics, with penalties, for public officials; and authorized planning for a state-sponsored Central Arizona water development project. It also revamped the organization of the state liquor department, and increased the state's contribution to employee retirement funds to 5% of the total.

In the three special sessions the legislature implemented the new statewide property appraisal program and devised a reapportionment plan. Four property assessment classifications were established that will have the effect of increasing state aid to schools and controls on local district financing.

The reapportionment plan devised in special session was attacked as Republican-oriented by the Democratic party. A petition was circulated that succeeded in forcing the issue onto the ballot in the 1968 elections.

Labor Disputes. The nationwide copper strike that began July 15 idled more than 20,000 employees in Arizona and had a significant adverse effect on the economy (see also LABOR). Tucson's two daily newspapers, the *Arizona Daily Star* and *Tucson Daily Citizen,* were struck in November by members of the International Typographical Union but managed to continue its publication during the strike.

Racial Disturbances. A mild racial disturbance flared in Tucson in July. Later the same month violent disorders broke out in Phoenix, and Mayor Milton Graham placed 30 square miles of the city under curfew. The incidents were the first racial outbreaks in Arizona's modern history.

Blizzard. One of the heaviest snowfalls on record in Arizona dumped more than 7 feet of snow on the northern part of the state in December. Thousands of persons were stranded in small communities and on farms. Air Force planes and helicopters dropped food and other supplies to stranded families, most of whom were Navajo Indians living on the extensive reservation areas in northern Arizona. At least nine persons died, and ranchers lost thousands of cattle and sheep.

Air Disaster. A U. S. Air Force F-4 jet trainer taking off from Davis-Monthon AFB crashed into a Tucson supermarket on December 18, killing four persons and causing extensive property damage.

James Kidd Estate. A court decision finally settled the litigation surrounding the will of James Kidd, who bequeathed $250,000 to anyone who could prove the existence of the human soul. Dozens of contestants were involved in the case, but the court awarded the money to the Barrows Neurological Research Center in Phoenix.

City Elections. In elections in Tucson the Democrats gained control of the mayor's office when James N. Corbett, Jr. was elected and retained control of the City Council. In Phoenix, Mayor Milton Graham won an unprecedented third-term victory in a sweep of the Charter Government Association party. Regional councils of government were organized for both the Phoenix and Tucson areas.

DAVID A. BINGHAM
University of Arizona

ARIZONA • Information Highlights

Area: 113,909 square miles (295,025 sq km).

Population: 1,635,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Phoenix, the capital, 520,000; Tucson, 245,000; Mesa, 49,000; Tempe, 45,000; Scottsdale.

Government: *Chief Officers*—governor, Jack Williams (Republican); lt. gov., none; secy. of state, Wesley Bolin (Democrat); atty. gen., Darrell F. Smith (R); treas., Charles H. Garland (R); supt. of pub. instr., Sarah Folsom; chief justice, Ernest W. McFarland. *Legislature*—(convenes Jan. 8, 1968): Senate 30 members (16 Republicans, 14 Democrats); House of Representatives, 60 members (33 R, 27 D).

Education: *School enrollment* (1965–66)—public elementary, 327,000 pupils (11,200 teachers); public secondary, 121,550 pupils (4,500 teachers); nonpublic schools, 36,300 pupils (1,300 teachers); college and university (fall 1965), 72,503 students. *Public school expenditures* (1965–66)—$185.000,000 ($524 per pupil); average teacher's salary, $6,960.

Public Finance (fiscal year 1966): *Revenues,* $394,805,521 (2% sales tax, $28,132.707; motor fuel tax, $31,466,586; federal funds, $122,756,191). *Expenditures,* $404,566,708 (education, $167,493,120; health, welfare, and safety, $60,705,798; highways, $148,098,301). *State debt,* none.

Personal Income (1966): $4,078,000,000; average annual income per person, $2,544.

Public Assistance (fiscal year 1966): $30,210,328 to 765,840 recipients (aged, $10,036,568; dependent children, $14,303,025).

Labor Force (employed persons, 570,900 1967); *Agricultural,* 36,500; *nonagricultural* (wage and salary earners), 511,500 (17% manufacturing, 23% trade, 22% government). *Unemployed persons* (July 15, 1967)—22,900.

Manufacturing (1965): Value added by manufacture, $719,882,000 (transportation equipment, $13,179,000; primary metals, $84,527,000; nonelectrical machinery, $134,366,000; electrical machinery, $151,171,000).

Agriculture (1966): *Cash farm income,* $543,737,000 (livestock, $232,119,000; crops, $267,985,000; govt. payments, $43,633,000). *Chief crops* (tons)—citrus fruit, 246,400 (ranks 4th among the states); hay, 1,127,000 (rank, 28).

Mining (1966 est.): *Production value,* $620,480,000. *Chief minerals* (tons)—copper, 739,569; sand and gravel, 18,730,000; stone, 2,271,000; pumice, 1,103,000.

Fisheries (1965): *Commercial catch,* 8,000 pounds ($1,000).

Transportation: *Roads* (1967), 39,770 miles (63,990 km); *motor vehicles* (1966), 991,113; *railroads* (1965), 3,288.4 track miles (5,292 km); *airports with scheduled service* (1966), 15.

Communications: (1966): *Telephones* (1967), 693,100; *television stations,* 9; *radio stations,* 65; *newspapers,* 15 (daily circulation, Sept. 1966, 432,157).

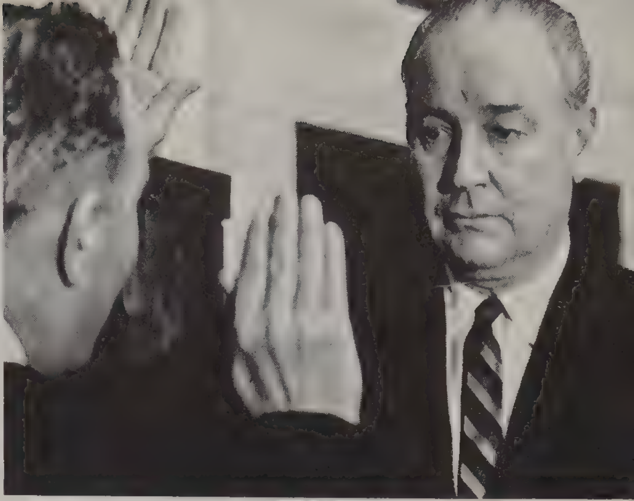
ARKANSAS

In 1967, Winthrop Rockefeller became the first Republican governor of Arkansas since 1874. His first year as governor was marked by partisan controversy between him and an almost solidly Democratic legislature. Exposés of brutality in state prisons, accusations of misconduct against some officials, charges of legislative bribery, and pleas for reform dominated the headlines. By the end of the year, however, few reforms had been accomplished.

Legislature. In its regular biennial session the General Assembly passed a record 658 bills. Among these were acts establishing a department of administration, a constitutional revision study commission, and a governmental efficiency study commission. Also passed were a lobbyist registration act; a closed primary law requiring voters to register party affiliation (although a referendum petition later required that it be submitted for popular approval in the next election); a vehicle safety inspection act; and a turnpike authority act. For the first time in recent years the legislature overrode some of the governor's vetoes, 4 out of 36. However, it accepted his veto of a controversial bill legalizing gambling. By the end of the year an impending revenue deficit and pressures for a constitutional convention made it likely that the governor would call a special session for February 1968.

The Governor. Rockefeller's programs were characterized by reform activities. A newly appointed insurance commissioner revitalized the state's insurance regulation program. The new state police director stopped organized gambling where local officials failed to act. However, he was jailed for refusing to reveal an informant to a grand jury and was later found to be ineligible for office because he did not meet a ten-year residency requirement. The governor accused members of the game and fish commission of official misconduct and started ouster proceedings which were checked by court order. Disclosure of antiquated prison practices led to attempts to inaugurate a more modern penal system.

Rockefeller lost some control over the administration when the Senate confirmed 93 appointments made by the previous governor. The Senate also passed a law requiring its approval of future appointments to boards and commissions. However, under the supervision of the chief executive, the newly formed department of administration consolidated comptroller, purchasing, and personnel functions.



UPI

WINTHROP ROCKEFELLER (*right*) is sworn in on January 10 by Chief Justice Carleton Harris as Arkansas' first Republican governor since the period after the Civil War.

Politics. Governor Rockefeller remained the dominant political personality in the state, and the Republican party continued to grow. The Democrats were racked by an internal struggle for leadership among segregationist groups, forces backing ex-Gov. Orville Faubus, and more moderate elements.

Education. Arkansas State College became the state's second public university. The state law prohibiting the teaching of evolution in the public schools was upheld by the Arkansas supreme court. The Arkansas Education Association threatened to resort to militant action to gain promised pay increases, a tenure law, and a negotiations act for teachers.

Economy. Industrial growth and attraction of new plants into the state continued in 1967 with the completion of such projects as the opening of a vanadium milling plant in Malvern, expansion of the plywood industry, dedication of the completed river port facilities in Camden, and construction of additional navigational facilities on the Arkansas River. Russellville was selected as the site for the first nuclear power plant to be built in the Southwest.

William C. Nolan
Southern State College

ARMED FORCES. See Air Force; Army; Marine Corps; National Defense; National Guard; Navy.

ARKANSAS • Information Highlights

Area: 53,104 square miles (137,540 sq km).

Population: 1,969,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Little Rock, the capital, 130,500; Fort Smith, 64,500; North Little Rock, 62,500; Pine Bluff, 57,000; Hot Springs, 29,500.

Government: *Chief Officers*—governor, Winthrop Rockefeller (R); lt. gov., Maurice Britt (R); secy. of state, Kelly Bryant (D); atty. gen., Joe Purcell (D); treas., Mrs. Nancy Hall; supt. of pub. instr., Arch Ford; chief justice, Carleton Harris. *Legislature*—General Assembly (convenes Jan. 13, 1969): (met Jan. 9–March 31, 1967): Senate, 35 members (0 Republicans, 35 Democrats); House of Representatives, 100 members (3 R, 97 D).

Education: *School enrollment* (1965–66)—public elementary, 252,505 pupils (9,135 teachers); public secondary, 201,765 pupils (7,510 teachers); nonpublic schools, 13,400 pupils (570 teachers); college and university (fall 1965), 43,026 students. *Public school expenditures* (1965–66)—$154,763,000 ($376 per pupil); average teacher's salary, $4,740.

Public Finance (fiscal year 1996): *Revenues*, $462,686,720 (3% sales tax, $77,113,024; motor fuel tax, $61,122,872; federal funds, $146,301,466). *Expenditures*, $441,589,227 (education, $132,762,106; health, welfare, and safety, $90,474,993; highways, $73,498,079). *State debt*, $37,243,000 (June 30, 1966).

Personal Income (1966): $3,931,000,000; average annual income per person, $2,010.

Public Assistance (fiscal 1967): $77,500,331 to 83,443 recipients (aged, $55,511,764; dependent children, $8,412,168).

Labor Force (employed persons, 724,300 1967): *Agricultural*, 72,900; *nonagricultural* (wage and salary earners), 617,400 (24% manufacturing, 15.9% trade, 14.5% government). *Unemployed persons* (mid-July 1967)—35,300.

Manufacturing (1965): Value added by manufacture, $1,216,370,000 (electrical machinery, $81,599,000; fabricated metals, $46,050,000; food and products, $202,201,000).

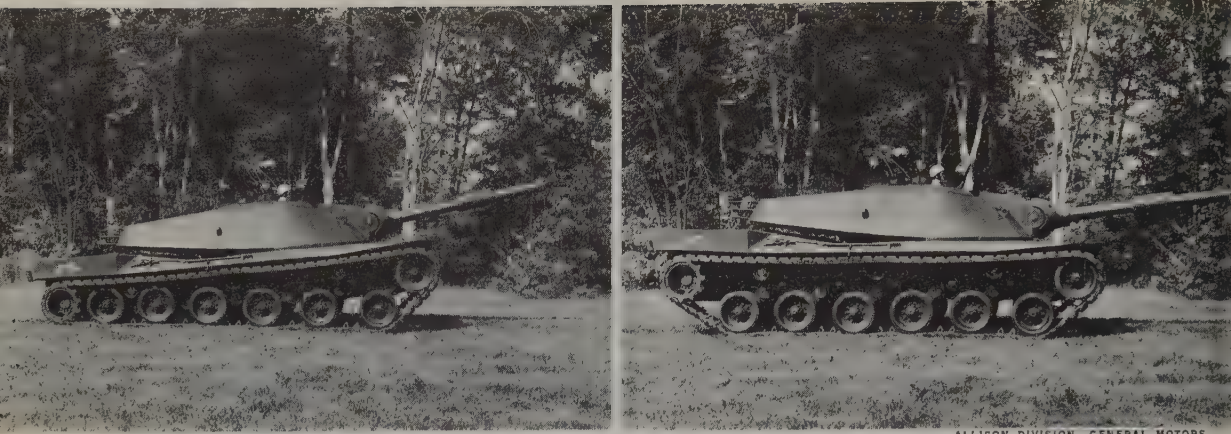
Agriculture (1966): *Cash farm income*, $1,021,129,000 (livestock, $439,645,000; crops, $495,775,000; govt. payments, $85,709,000). *Chief crops* (tons)—Rice, 1,049,400 (ranks 3d among the states); soybeans, 2,348,640 (rank, 4th).

Mining (1966 est.): *Production value*, $186,022,000. *Chief minerals* (tons)—stone, 21,803,000; sand and gravel, 14,231,000; bauxite, 1,803,000; clays, 1,097,000.

Fisheries (1965): *Commercial catch*, 8,305,000 lbs. ($633,000).

Transportation (1966): *Roads* (1967) 81,372 miles (130,928 km); *motor vehicles* 968,715; *railroads* 5,950 track miles (9,574 km); *scheduled service airports* (1961) 8.

Communications (1967): *Telephones*, 663,000; *television stations*, 8; *radio stations*, 90; *newspapers*, 30 (daily circulation, 723,342).



ALLISON DIVISION, GENERAL MOTORS

MBT-70, an important new battle tank being developed jointly by the U. S. and West Germany, incorporates several technical advances. It can be elevated for mobility.

ARMY

As the war in Vietnam's jungles and rice paddies ground on in 1967, the U. S. Army faced a new strategic mission—the construction of an antiballistic missile (ABM) system to cope with a possible future Communist Chinese intercontinental ballistic missile (ICBM) threat against the United States.

The decision to construct the ABM system had many political and diplomatic overtones. For the Army it meant a long-sought assignment extending its responsibilities for U. S. territorial defense.

Meanwhile, the defense of South Vietnam against an attempted Communist take-over continued to engage an increasing number of Army forces in 1967. The overall size of the Army grew, particularly in combat aviation.

ABM System. Before 1957, during the so-called missile gap crisis, the Army proposed construction of an antiballistic missile defense that could launch projectiles against incoming long-range missiles. The Army called its proposed "antimissile missile" the Nike-Zeus. The concept was likened to hitting a needle with a needle in the dark. The Army's proposal was rejected by the Eisenhower administration as not yet feasible, but research and development were authorized. The Army project was subsequently altered and called Nike-X, but proposals to begin production were rejected.

On Sept. 18, 1967, Secretary of Defense Robert S. McNamara announced that, while a proposed system to cope with the Soviet missile force had been rejected again, a "thin" ABM system for protection against a possible Communist Chinese ICBM threat would be constructed. The Soviets, it was said, already possessed enough ICBM's to saturate any ABM system. The USSR could be deterred only by the threat of retaliation that would end civilization.

For the presently lesser Chinese threat the administration authorized the Army to construct a network of radar and missile launchers, now called the Sentinel system, at a cost of $5 billion, over a period of five years. Each antimissile missile would cost about $1 million; each radar unit about $100 million. The first operational battery was due in the early 1970's. The system would buy a certain degree of protection for key U. S. cities and ICBM bases over a period of 10 years, after which, it was presumed, China would also have enough ICBM's to make the ABM network obsolete. (See also MISSILES.)

Vietnam. The Army's manpower commitment to the fighting in Vietnam had grown to 304,000 by the fall of 1967, over 50,000 more than the peak Army commitment to the war in Korea in 1952. Army

LOCKHEED-CALIFORNIA COMPANY, LOCKHEED AIRCRAFT CORP.

U. S. ARMY CHEYENNE is designed to "ride shotgun" for troop-carrying helicopters in Vietnam. The heavily armed craft can fly more than 250 miles per hour, but will make vertical takeoffs and landings in battle areas.

units scoured South Vietnam in "search and destroy" operations, plunging through rice paddy and jungle as often as they skipped the miles in helicopters. As North Vietnamese regulars appeared in South Vietnam in increasing numbers, the incidence of larger battles increased. For example, Operation Pershing cost American and South Vietnamese forces 483 dead, and Operation Junction City II, 282 dead. But the reported enemy death tolls were 3,410 and 2,728, respectively. In November, in a bitter battle at Dakto, the United States lost 287 dead, 18 missing, and 1,000 wounded; South Vietnam 50 dead, the enemy 1,641 dead and uncounted wounded.

Improved medical aid and the smaller-scale fighting in Vietnam, as compared with the Korean War, made a marked difference in comparative death tolls, despite the fact that the duration of the U. S. military commitment in Vietnam had exceeded that of Korea. U. S. casualties in Vietnam from Jan. 1, 1961, to Nov. 18, 1967, totaled 14,846 killed in action and 93,227 wounded, compared with Korean casualties from July 1, 1950, to July 31, 1953, of 27,704 dead and 79,526 wounded. By Nov. 18, 1967, the estimated death toll of the enemy in Vietnam was 238,787. Direct U. S. combat in Vietnam did not begin until 1964.

Along with conducting its own intensive combat operations in May 1967, the Army increased to 5,200 the number of advisers attached to all levels of South Vietnam's armed forces. About 750 Army men were assigned to civil affairs duties in support of the civic action or "pacification" effort. (See VIETNAM WAR.)

Strength. The Army in 1965 had less than a million men. By Jan. 1, 1967, it had grown to 1,405,804. Additions were to bring the strength to 1,520,000 by the end of the year, but some leveling off appeared in prospect. The authorized strength for June 30, 1968, was 1,521,000.

In 1967 the Army activated a new division (the Americal), made up of existing Army brigades in Vietnam. It also activated one separate brigade (the 198th Infantry) and one armored cavalry regiment (the 6th Armored), and announced plans to reactivate the 6th Infantry Division by mid-1968 in order to bring the Army to 19 divisions, 11 separate brigades, and 5 armored cavalry regiments.

The Army carried out the previously announced closing of the Headquarters Building, 5th Army, Chicago; Fort Douglas, Utah; Forts Slocum and Totten, N. Y.; and Lordstown Military Reservation, Ohio, as part of a cost-efficiency program.

The program begun in 1966 to "salvage" 30,400 men for Army service by July 30, 1967, and 100,000 a year thereafter by lowering mental standards for recruits appeared to be making some progress. As of Sept. 15, 1967, 35,373 former rejectees had been accepted. (See also SELECTIVE SERVICE.)

Training. In support of expanded Army aviation training, Hunter Air Force Base, Ga., was transferred to Army control. The Army expanded use of educational closed-circuit television programs for training recruits. The Continental Command introduced systems engineering into its service schools. Similarly, 11 officer career programs were altered to include operations research and systems analysis. Computers were distributed to personnel managers.

But the Army's training was not all esoteric. The so-called "quick kill" technique of rifle marksmanship—fast, unaimed, instinct shooting—for dealing with briefly glimpsed guerrilla enemy forces, was ordered adopted at all training centers.

UPI

GEN. WILLIAM C. WESTMORELAND, commander of U. S. forces in Vietnam, at a joint session of Congress in April.

WILLIAM C(HILDS) WESTMORELAND, U. S. Army general and commander of U. S. forces in Vietnam, was summoned home in April 1967 to present a personal report to the public. Addressing a joint session of Congress, he concurred with the Johnson administration's view that the Vietnam conflict was caused by "aggression from the north." He expressed confidence in ultimate victory over Communist forces.

Westmoreland was born March 26, 1914, in Spartanburg County, S. C. He graduated from the U. S. Military Academy at West Point in 1936, fought in Europe during World War II, and later in the Korean conflict. In 1958 he took command of the 101st Airborne Division, and in 1960 he became superintendent at West Point. On April 25, 1964, he succeeded Gen. Paul Harkins as commander of the U. S. Military Assistance Command in Vietnam (MACV).

Reserves. The authorized strength of the Army Reserve Force, including the Army National Guard, was 678,500 (National Guard, 418,500; Army Reserve, 260,000) when the president signed the budget in September. The projected strength for June 30, 1968, was slightly less—a total of 660,000 (National Guard, 400,000; Army Reserve, 260,000). Secretary of Defense McNamara on Nov. 6, 1967, authorized increases of 7,800 men in the Army Reserve and 12,000 in the National Guard (a 3% increase over congressional limits) to make up for the lag between discharges and new enlistments. (See also NATIONAL GUARD.)

Deployments. With 304,000 men in Vietnam, the Army continued to maintain its sizable troop commitments around the world. There were 230,000 Army troops in Europe at the end of the year. In Korea, the 8th Army and supporting units totaled 50,000 men. In Hawaii, Headquarters U. S. Army of the Pacific and the 11th Infantry Brigade included 10,000 men. The Army in the Ryukyus totaled 18,000, and Army troops in Japan numbered 5,000. The Army Southern Command in the Caribbean area totaled nearly 9,000 men, and the Army in Alaska, 12,000. Another 50,000 men were scattered in various assignments around the world.

Plans were announced in May 1967, however, for a reduction of U. S. Army strength in Germany during 1968. Two brigades of the 24th Infantry Division and certain supporting units—about 25,000 men

—were scheduled to be withdrawn to commands in the United States.

Procurement. The Army received administration approval of most of its procurement requests for the fiscal year 1968, but along with the other services suffered an across-the-board cut in Congress. The final procurement appropriation for the Army was $5,881,000,000. Reflecting the high consumption by the war, ammunition alone accounted for $2,239,000,000 of the total. The biggest item in the Army procurement appropriation, the amount for ammunition was nearly twice the amount appropriated for the 1967 fiscal year.

Army Aviation. The successful use of helicopters and other small aircraft in Vietnam produced continued support in Washington for the expansion of Army aviation. From the beginning of 1967, in accordance with an announcement Dec. 15, 1966, the Army pilot-training rate was accelerated from 410 per month to a projected goal of 610 per month by June 30, 1968. By contrast, the Army pilot-training rate in 1962 was less than 80 per month. By the end of 1967 the Army had 9,000 aircraft and more than 12,600 aviators.

More than 1,500 Army aircraft of various types were ordered in the first nine months of 1967. The long-awaited AAFSS (Advanced Aerial Fire Support System), whose first example was the AH-56A Cheyenne, was unveiled to the public. This prototype of 10 helicopter-style "aerial platforms," designed to provide direct fire support, was immediately put through flight tests. A new helicopter, AH-IG Huey Cobra, was delivered to the Army and was to be deployed in Vietnam by the end of 1967.

Research and Development. While a start was ordered in constructing an ABM system, research and development efforts on components of the Nike-X system were ordered continued with tests at Kwajalein, in the Pacific. The SAM-D surface-to-air missile continued in "advanced development," but no decision had been made for deployment. The Lance missile system was in an advanced development stage, with the ground-support equipment committed to production. The Army was pleased with advances made in a new lightweight gas turbine engine. It was also working on crash-resistant fuel tanks. The SPIW (Special Purpose Individual Weapon) project, a rifle designed to fire .22 caliber bullets or darts, or to launch grenades, continued in an exploratory program.

M-16 Rifle. Reports that M-16 rifles jammed in combat precipitated a congressional inquiry. A House panel blamed many factors including the type of powder used, single-source procurement, conflicting instructions for maintenance, and lack of training in the proper use and care of the rifle. The Pentagon, after its own investigation, ordered overhauling including use of a heavier bolt to slow down recoil action, but pronounced the M-16 satisfactory. The Pentagon promised a new testing program.

Administration. No major changes were made in the Army's civilian and military command in 1967, as Stanley R. Resor continued as secretary of the Army and Gen. Harold K. Johnson as chief of staff. Gen. Creighton Abrams, vice chief of staff, was named deputy to Gen. William C. Westmoreland, commander in Vietnam; Gen. Ralph E. Haines, Jr., became vice chief of staff. (See also NATIONAL DEFENSE.)

JACK RAYMOND
Author of "Power at the Pentagon"

ART

Sculpture dominated the art scene in 1967. It was sometimes strongly challenged, however, by environmental projects, which occasionally attained remarkable complexity and technical sophistication. Indeed, a technical revolution seemed to be threatening traditional concepts of art as they have not been threatened since the development of abstract art and cubism in the early 1900's. This trend, international in scope, was reflected in work seen at Expo 67 in Montreal.

EXPO 67

Symptomatic of the technical revolution was the spectacular use made of film at Expo 67. Almost 3,000 films were shown in the various pavilions. Many of them took an environmental approach, using 360° screens, screens on ceilings and floors, or multiple screens in conjunction with rotating seats, reflecting mirrors, and live actors. The Czechoslovak pavilion attracted the most attention with "polyvision," a synthesis of 8,000 slides, eight film images, and prismatic environments of flowing color.

Expo 67 displayed more art of all kinds than any similar international exposition of recent years. Masterpieces of art, ranging from ancient sculpture to paintings by Jackson Pollock, were taken to Montreal from many countries. Commissions amounting to $2.5 million were given to 50 Canadian sculptors. In Montreal, Alexander Calder constructed his largest work, a stabile standing 70 feet (21 meters) tall. The French exhibited almost 200 works, tracing the history of French art from the Middle Ages to the present. At the United States pavilion there was a selection of huge pop, op, and hard-edge paintings.

The international importance of sculpture was reflected in the popularity of Expo's survey of sculpture from Rodin to the present. Contemporary sculpture was seen at the Swiss pavilion, which showed works by Giacometti, Max Bill, Zoltan Kemeny, and Yves Tinguely, and at the German pavilion, where kinetic works by Otto Piene, Günther Uecker, Heinz Mack, Günther Haese, and Harry Kramer were shown.

SCULPTURE

From one end of the United States to the other, sculpture exhibitions were the major artistic events of the 1967 season. New trends in sculpture showed a concern with irreducible forms, serial ideas, mass-production techniques, and an eager desire to incorporate into art the latest developments of technology.

New Trends. Support for technological experimentation came from the American Telephone and Telegraph Company, International Business Machines, and the AFL-CIO. These organizations gave money and lent technicians to EAT (Experiments in Art and Technology), a group that helped Robert Whitman produce light sculpture with laser beams.

New developments in sculpture were seen in many of the one-man and group shows held at leading New York City galleries in 1967. They included soft polyurethane carpet pieces by Piero Gilardi (Fischbach Gallery), voluptuous foam rubber work by John Chamberlain (Castelli), fluorescent light "proposals" by Dan Flavin (Kornblee), colored plastic constructions by David Weinrib (Royal Marks), electromagnetic works by Takis (Wise), vacuum-molded plexiglass reliefs by Craig Kauffman (Pace), tinted color boxes by Larry Bell (Pace), modules

UPI

MONET'S *La Terrasse à Sainte-Adresse* **was auctioned in December for $1.4 million, a record price for an impressionist work. The Rev. Theodore Pitcairn (*right*) bought the painting in 1926 for $11,000.**

constantly rearranged to produce different combinations by Robert Morris (Castelli), and marble and aluminum combinations by Isamu Noguchi (Cordier & Ekstrom).

The growing interest in monumental projects was demonstrated by Sol Lewitt's scale models for huge structures (Dwan), by Claes Oldenburg's sketches for colossal surrealistic forms (Janis), and by such exhibits as "Macrostructures" (Feigen) and "Architecture Sculpture-Sculpture Architecture" (Visual Arts Gallery).

Comprehensive Exhibits. The Guggenheim International Exhibit in New York City in 1967 was devoted exclusively to sculpture for the first time. The Los Angeles County Museum showed the most comprehensive survey ever assembled of modern American sculpture, with 166 large works by 80 artists. In Washington, D. C., the Gallery of Modern Art featured constructions by Larry Bell, Ron Davis, Dan Flavin, Don Judd, Craig Kauffman, and John McCracken in a didactic show called "A New Aesthetic." The Walker Art Center in Minneapolis and the Milwaukee Art Center presented objects by Stephen Antonakos, Otto Piene, Chryssa, John Goodyear, and others in a show called "Light, Motion, Space."

Outdoor Display of Sculpture. Monumental sculpture by 30 Americans was displayed outdoors in various locations around New York City, the first exhibit of this kind ever held. Chicago unveiled its largest, most exciting outdoor sculpture, a steel form built from a model donated by Picasso. The work is 50 feet (15.3 meters) high and weighs 163 tons (148 metric tons). A smaller version of this work was seen at New York's Museum of Modern Art in the largest survey of Picasso's sculpture ever held in the United States. On the campus of the University of Chicago Henry Moore unveiled his "Nuclear Energy," commissioned to commemorate a quarter century of the atomic age.

Retrospectives. There were several important showings of "old masters" of modern sculpture during the year. A retrospective at the University of California, Los Angeles, of Alexander Archipenko's work traced his career from 1908 to 1963. The first one-man show in the United States of Henry Moore's work since 1946 was held at the Brooklyn Museum. A retrospective of Louise Nevelson's sculpture was mounted by the Whitney Museum in New York.

PAINTING

Retrospective exhibits dominated the painting scene in 1967. A new sense of social involvement was apparent in shows arranged specifically to protest against the war in Vietnam.

Retrospectives. Retrospectives provided the major attraction among the painting exhibitions in 1967. Of special importance were the shows devoted to Jackson Pollock (Museum of Modern Art); Paul Klee (Guggenheim); Roy Lichtenstein, whose first major museum showing it was, and Allan Kaprow (both at the Pasadena Museum of Art); Andrew Wyeth, whose works drew record-breaking attendance (Pennsylvania Academy of Arts and the Whitney Museum); Franz Kline (Marlborough-Gerson Gallery, New York); Fernand Léger (International Galleries, Chicago); Yves Klein (Jewish Museum, New York); Aubrey Beardsley (Gallery of Modern

UPI

THOMAS HOVING, before a statue of John the Baptist, became director of the Metropolitan Museum of Art in 1967.

THOMAS P(EARSALL) F(IELD) HOVING, who became director of the Metropolitan Museum of Art in New York City on April 15, 1967, brought to this post a profound knowledge of art history as well as a talent for organization and public relations. Soon after taking office, he began to arrange special exhibitions aimed at making the museum's art treasures more meaningful to the general public.

Hoving was born in New York City on Jan. 15, 1931. He studied art history at Princeton University (B. A., summa cum laude, 1953; Ph.D., 1959) and then joined the staff of the Metropolitan as a curatorial assistant. In 1963 he became associate curator of the museum's medieval arts collection at the Cloisters, and in 1965 he was appointed curator of the medieval arts department. As New York City's commissioner of parks (1966–67), he organized a series of cultural and recreational events in the city's parks.

Art, New York); and Édouard Manet (Chicago Art Institute and Philadelphia Museum of Art).

Protest Shows. A new kind of exhibition, the protest show, grew out of the controversy over U. S. involvement in Vietnam. In New York at the beginning of the year, artists Allan D'Arcangelo, Mark di Suvero, James Rosenquist, Leon Golub, Balcomb Greene, and others collaborated with poets, actors, and musicians in a week-long demonstration called "Angry Arts Against the War in Vietnam." Similar in purpose was the "Protest and Hope" show at the New School Art Center, New York City, which included works by Leonard Baskin, Robert Indiana, Jack Levine, George Segal, and Ben Shahn.

Theme Shows. Didactic and theme shows were popular in 1967, as they have been for the past several years. At the Loeb Student Center Art Gallery of New York University, "Poem Paintings" by Norman Bluhm and the late Frank O'Hara combined words, colors, and gestures. "Masters of the Loaded Brush" displayed 17th and 18th century oil sketches by 56 artists at Knoedler's in New York City. "Language to Be Looked at and/or Things to Be Read" at Dwan Gallery exhibited literary-visual works by Emilio Marinetti, Francis Picabia, and others.

The unusual in Oriental art was featured in "Fantastics and Eccentrics in Chinese Painting," at the Asia House Galleries in New York. "Large-Scale American Paintings," at the Jewish Museum, New York City, examined the effects of monumental size in works by the New York school of painters. The East Hampton Gallery, New York City, showed "Visionaries," which attempted to communicate erotic and mystical experiences in drawings, paintings, and an environmental light spectacle. "Two Generations," at the Janis Gallery, contrasted the formalist tradition of Europeans like Malevich and Mondrian with work by the next generation in America—Jackson Pollock, Franz Kline, Willem de Kooning, and Barnett Newman.

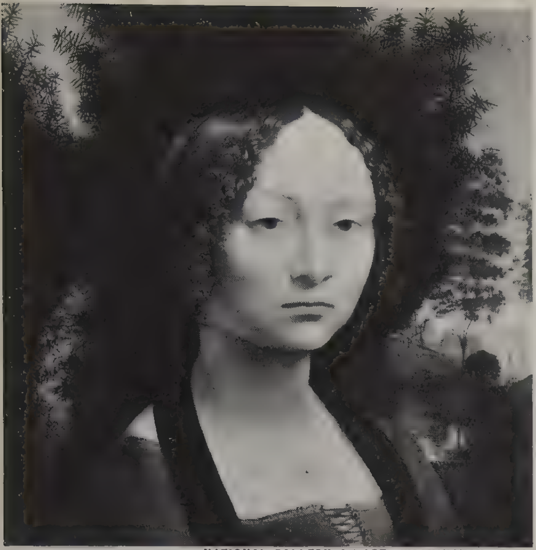
One-Man Shows. Important one-man shows were given in New York to the painters Romare Beardon (Cordier & Ekstrom Gallery), Hans Hartung (Emmerich), Allan D'Arcangelo (Fischbach), Oyvind Fahlstrom (Janis), Asgar Jorn (Lefebre), Sam Francis (Matisse), Ellsworth Kelly (Janis), Pistoletto (Kornblee), and Gene Davis (Poindexter), and in Washington, D. C., to Jules Olitski (Corcoran Gallery) and Morris Louis (Gallery of Modern Art).

Outside New York. As in the past few years, some of the most important exhibitions of art were held outside New York City. The first major exhibit of the Italian baroque painter G. B. Gaulli, called Baciccio, was held at the Allen Museum of Oberlin College. Works by Ingres were seen at the Fogg Museum, Cambridge, Mass. Other shows featured works by Gilbert Stuart (National Gallery), Hogarth (Richmond Museum of Art), Degas (Philadelphia Museum of Art), and Magnasco (University of Michigan Art Museum).

The Detroit Institute of Arts mounted a major survey of artists of the Peale family, as well as one of the year's most ambitious exhibitions of contemporary art, "Color, Image, Form," which included works by George Rickey, Robert Morris, Don Judd,

THE METROPOLITAN MUSEUM OF ART

GREEK HORSE, long considered one of the best ancient bronzes in existence, was exposed as a 50-year-old fake.



NATIONAL GALLERY OF ART, WASHINGTON, D. C.

LEONARDO DA VINCI'S *Ginevra dei Benci* was purchased by the National Gallery of Art in 1967 for over $5 million.

Tony and Richard Smith Jules Olitski, Morris Louis, Claes Oldenburg, and Andy Warhol.

Posters. The resurgent interest in posters may also be linked to the growing preference for art with an immediate relevance to life, as seen also in the protest shows. The most popular poster style was the psychedelic, or hippie, style spotlighted in various exhibitions, notably the "Joint Show" at the Moore Gallery, San Francisco. These posters, by Victor Moscoso, Wes Wilson, Rick Griffin, and others, have transformed their sources—art nouveau, German expressionism, and op art—into a new kind of folk art for the younger generation.

MUSEUMS AND COLLECTIONS

U. S. museums made several major acquisitions in 1967 and appointed new men to some key positions. Museums continued a trend toward strengthening their ties to the community.

National Gallery. The National Gallery of Art, Washington, D. C., purchased a portrait by Leonardo da Vinci from the Prince of Liechtenstein for a sum between $5 million and $6 million—the highest price ever paid for a painting. *Ginevra dei Benci* thus became the only generally acknowledged painting by Leonardo outside Europe. Also in 1967, the National Gallery received from the son and daughter of Andrew Mellon, original benefactor of the museum, $20 million to increase the role of the museum in the nation's cultural life.

Metropolitan Museum. Thomas P. F. Hoving, former New York City parks commissioner, became the director of New York's Metropolitan Museum of Art in April. Hoving, who succeeded the late James J. Rorimer, was formerly curator of the museum's medieval collection at the Cloisters.

One of the Museum's most famous works, a bronze horse long believed to be a classical Greek work, was revealed in December as a forgery. The museum's major acquisitions of 1967 were Canova's statue of Perseus, the Egyptian temple of Dendur, and Monet's *La Terrasse à Sainte-Adresse.* The 2,000-year-old temple was a gift to the United States from the United Arab Republic in appreciation for American help in saving art treasures from the waters of the Aswan dam. The Monet painting was bought for $1.4 million, an auction record for an impressionist work.

Museum of Modern Art. Bates Lowry, formerly chairman of the Art Department at Brown University, was appointed director of this New York City museum. He will replace Rene d'Harnoncourt in July 1968.

Sidney Janis, one of the nation's leading art dealers, gave his $2 million collection to the museum. The collection comprises 100 works by 54 outstanding modern artists, including Picasso, Giacometti, Kandinsky, Mondrian, Léger, Delaunay, and Pollock. The museum also acquired a gift from Alexander Calder of 19 of his pieces.

Spanish Museums. Two of the most important art discoveries of the decade were revealed in Madrid. The Prado quietly put on display a priceless painting, acquired from a private owner in 1963, of the Dead Christ by the 15th century Italian Antonello Messina. At the National Library, Madrid, 700

ARNOLD NEWMAN

PABLO PICASSO poses with his *Bust of Sylvette,* the model for a 60-ton concrete sculpture that will be constructed on an outdoor site near New York University.

pages of manuscript and drawings by Leonardo da Vinci were rediscovered. The finding of this treasure, apparently missing for 200 years, was announced in February.

Forgeries. In New York City the district attorney investigated a dealer who sold hundreds of forged Chagall and Picasso watercolors. In California the attorney general was informed of scores of forged Renoirs, Sisleys, and Dufys. The U. S. attorney general began an investigation into the forgery of paintings by Pollock and Kline, and Joan Miró flew to New York to testify in a lawsuit involving an exhibition of allegedly fake Mirós. In Texas, an oil millionaire was told by experts that 44 of the 58 works in his collection were forgeries. Dealers and collectors in London were embarrassed by art scandals involving allegedly false watercolors by Sargent.

Sales. Picasso's *Mother and Child,* painted in 1902 during the artist's Blue Period, was auctioned for $532,000, the highest price ever paid for a work by a living artist. At the same sale, at Sotheby's in London, a Cézanne brought $406,000, a record for a watercolor.

AWARDS, HONORS, AND GRANTS

The National Council on the Arts made its first awards in 1967. Among the 60 sculptors and painters to receive $5,000 awards were Charles Biedermann, Ronald Bladen, Mark di Suvero, Dan Flavin, Don Judd, Robert Morris, Charles Pollock, and Tony Smith. The National Institute of Arts and Letters elected to membership the painters Richard Diebenkorn, Joseph Hirsch, William Thon, and the late David Burliuk. Recipients of Guggenheim fellowships included James Brooks, Allan Kaprow, Nicholas Krushenick, Raymond Parker, Charles Pollock, and the late Ad Reinhardt.

Prizewinners in the 30th Biennial Exhibition of Contemporary American Painting at the Corcoran Gallery were Jules Olitski, Paul Jenkins, John McLaughlin, and Kenneth Noland. The 9th Bienal de São Paulo in Brazil awarded the grand prize of $10,000 to the British painter Richard Smith for his shaped canvases. The U. S. representation at the Bienal included a one-man show by the late Edward Hopper and works by Robert Indiana, Jasper Johns, Roy Lichtenstein, Claes Oldenburg, Robert Rauschenberg, George Segal, and Andy Warhol. The painter Ivan Albright and the architect Mies Van der Rohe were elected to the American Academy of Arts and Letters.

The Jacob M. Kaplan Fund and the National Council on the Arts each provided a grant of $500,000 to begin construction of a $10,000,000 center for painters, sculptors, and other artists on New York City's lower West Side. A city block will be converted into 500 low-income housing and studio units for artists.

OBITUARIES

Important artists and scholars of art who died in 1967 included Charles E. Burchfield (73), distinguished "romantic-realist" painter of the American scene; Albert Ten Eyck Gardner (58), associate curator of American art at the Metropolitan Museum in New York; Edward Hopper (84), internationally renowned American realist (see HOPPER); Johannes Itten (79), famous Bauhaus painter-teacher and retired director of the Zurich Kunstgewerbeschule; René Magritte (69), Belgian surrealist painter; Wilbur D. Peat (68), retired director of the Herron Museum of Art in Indianapolis; Ad Reinhardt (53), one of America's outstanding nonobjective painters; and Jean Xceron (77), European abstractionist.

VICTOR H. MIESEL
University of Michigan

ARTHRITIS

To a public conditioned by the press to expect "breakthroughs" and "miracle drugs," 1967 proved to be somewhat of a disappointment. However, very satisfactory progress was made toward understanding and defining the problems connected with arthritis yet to be solved. The great number of meetings, symposia, and workshops that took place during the year provided evidence of the cooperative research that should ultimately lead to solutions.

Rheumatoid Arthritis. At an international meeting in Amsterdam in April, rheumatologists and orthopedic surgeons were brought together to develop criteria for performing early synovectomy, an operation in which the lining of the arthritic joint (synovium) is removed. The successful removal of the inflamed synovium seems to save the joint from further destruction, and the means of proving this phenomenon and developing upon it were the subjects of this meeting. Several investigators showed that cells of the joint lining are at least in part responsible for the abnormal proteins found in the blood of people with rheumatoid arthritis. While it is by no means certain that these proteins cause the disease, their resemblance to antibodies is, at least, further evidence that the body's natural immunity mechanisms play a role in the disease.

Different approaches to the same question involved the injection of immunosuppressive or caustic materials into the affected joint. Researchers also experimented with drugs previously used mostly in treating cancer. Such drugs were generally given only to patients whose rheumatoid arthritis proved unmanageable by conventional means and only under carefully controlled circumstances. Nevertheless, some promising signs of containment of the disease were detected in these experimental studies.

Other investigators attempted to discover the antigen that evokes the immune response, and one researcher found bacteria resembling those that cause diphtheria inside some of the cells removed from afflicted joints. However, much work is still necessary to prove that these bacteria are causally related to rheumatoid arthritis.

In another attempt to find the cause of the disease, investigators continued to measure the levels of trace metals, such as copper and zinc, in the blood and tissues of afflicted patients. These metals appear to play a part in the metabolism of amino acids, the components of all proteins; and whatever their exact role, proteins are definitely known to be involved in the disease.

Osteoarthritis. In patients with osteoarthritis, it was found that discrepancies in the length of their legs commonly occur. By the time a patient reaches middle age, degenerative changes become established in the hip of the longer side and in the knee of the shorter side.

GEORGE E. EHRLICH, M. D.
Temple University Medical School
Director, Section of Rheumatology,
Albert Einstein Medical Center–Moss Rehabilitation Hospital, Philadelphia

PAOLO KACK, FROM BLACK STAR

PORTRAIT OF MAO TSE-TUNG is carried at the head of a procession in Peking. Throughout the year, revolutionary fervor increased within Communist China.

ASIA

Asia continued throughout 1967 to be the focus of the world's attention and the center of the world's anxieties. Southeast Asia was still the theater of the one large-scale war being waged on the globe—a war that increased yearly in terms of the forces and the wealth committed to it. The western edge of Asia was also the scene, in June, of a short war with far-reaching implications (see MIDDLE EAST).

The heart of Asia is occupied by China, the largest nation on earth in terms of population. A revolutionary power whose internal politics and external policies alike are largely an enigma, China has preoccupied the leaders of other states.

Vietnam. The increasingly serious struggle in Vietnam continued to raise very difficult questions to which no entirely convincing answers were being found. What real prospect was there of North Vietnam's being forced to acknowledge defeat? Had the U. S. commitment to maintaining large forces on the Asian mainland any foreseeable end? On the other hand, it could be asked, what would be the consequences—for South Vietnam, for Southeast Asia, for the world—of any weakening or withdrawal on the part of the United States? The only progress to be noted in this debate (whether conducted in the United States, in the free Asian countries, or in European capitals) was an increasing realization among the more responsible debaters that there were no easy answers to these questions.

Some slowly emerging common ground might be stated in propositions such as the following: North Vietnamese aggression against South Vietnam in support of the Vietcong was a reality that must be either acquiesced in or opposed; liberal, antiseptic governments that conformed to the standards of Western democracy (which were, in any case, very difficult to find) were not the only governments that deserved support against aggression; support of South Vietnam involved grave risks, including, in the long run, war with Communist China, and in any case was not likely to be a short-term or cheap business. Lastly, it remained true that even if many governments sympathized with the position and policy of the United States, they were quite unlikely to commit their countries to serious costs or risks in support of it.

The course of the war in Vietnam steadily involved more and more U. S. troops—some 500,000 by the end of the year. The Vietcong and North Vietnamese also gained more support from China and, particularly in equipment and arms, from the Soviet Union. The odd nature of the war, which had no discernible front line and invulnerable rear areas fully controlled by the respective sides, made it difficult to assess the trend of the military events. However, it appeared that the large-scale commitment of U. S. troops, which had begun in 1965, had made it impossible for the Vietcong to win the war in the military sense. Their hopes rested on a U. S. political decision to withdraw.

The most important military development was the complete frustration of the Vietcong plans to advance from guerrilla activity to confrontation of main-force units. Where this was attempted, the Vietcong were defeated. Even in the far north, under circumstances favorable to the Vietcong, the attempt to turn the U. S. Marine encampment at Conthien—just south of the so-called Demilitarized Zone (DMZ)—into another Dienbienphu, failed in September. American and South Vietnamese hopes were pinned on the assumption that as enemy regular troops were forced to evacuate more areas, guerrillas would encounter increasing difficulties.

Vietnamese internal politics during the year continued on a surprisingly stable course—provided that "stability" is interpreted in the modest sense appropriate to so divided and unsettled a country. The military regime remained in power, but it was increasingly being legitimated. In the presidential election on September 3, Chief of State Nguyen Van Thieu was elected president, and Marshal Nguyen Cao Ky (premier since June 1965), vice president. The provisional National Assembly on October 3 ratified the election result by a slim majority (58 to 43) despite charges of irregularities. As provided in the new constitution, a House of Representatives was elected on October 22.

(*Continued on page 82*)

ASIA 1967: WORLD FOCAL POINT

The Cultural Revolution in mainland China and the continuing war in Vietnam dominated events in Asia in 1967. Mao's campaign to tighten his control over Chinese society produced an upheaval in China and repercussions that were felt throughout the Far East. In war-torn Vietnam, meanwhile, the determined prosecution of the conflict by both sides caused growing concern around the world.

MONGOLIA
AFGHANISTAN
KASHMIR
WEST PAKISTAN
COMMUNIST
NEPAL
SIKKIM
BHUTAN
INDIA
EAST PAKISTAN
BURM
MALDIVE ISLANDS
CEYLON

BURMA: Anti-Chinese riots in Rangoon in July produced littered streets, wrecked automobiles, and a declaration of martial law.

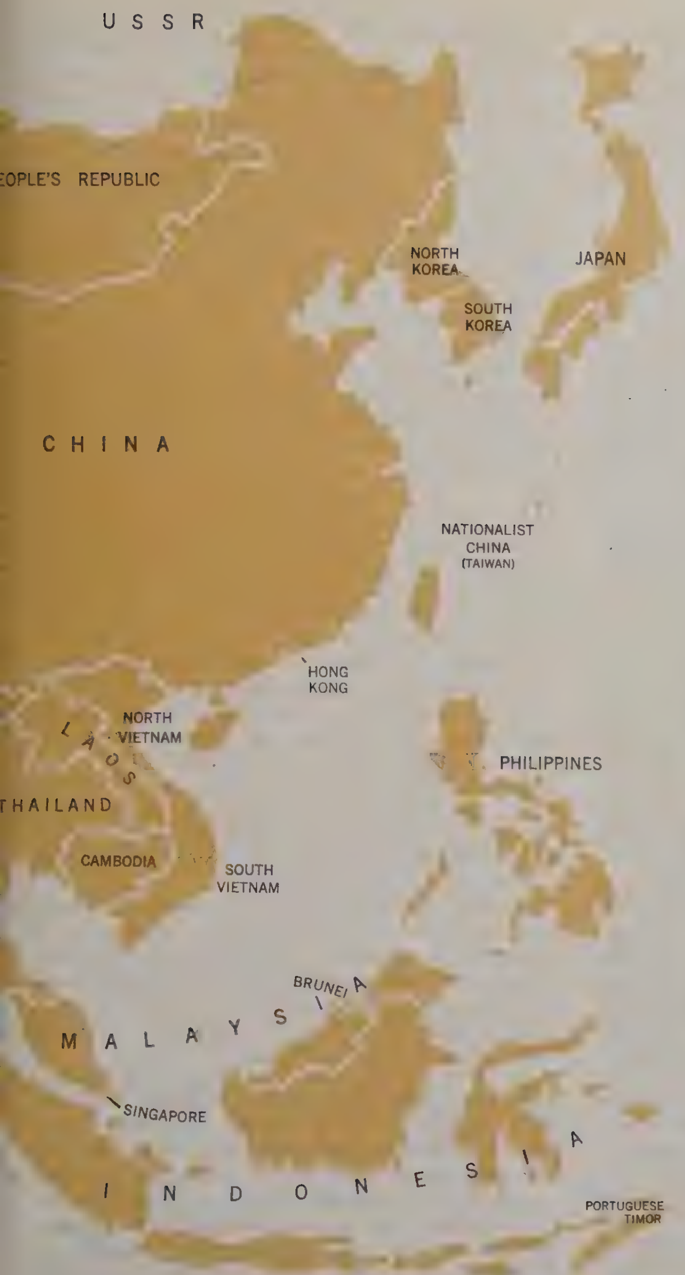
UPI

INDONESIA: In a January demonstration in Djakarta, Indonesian students marched in the streets to demand that President Sukarno be officially branded a traitor.

UPI

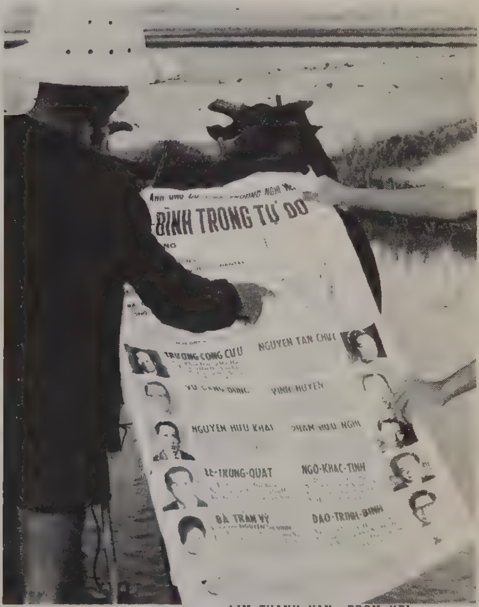
UPI

HONG KONG: British troops stand guard behind a barbed wire barricade across Hong Kong's main street following a July police raid on a Communist headquarters.


USSR
EOPLE'S REPUBLIC
CHINA
NORTH KOREA
SOUTH KOREA
JAPAN
NATIONALIST CHINA (TAIWAN)
HONG KONG
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
PHILIPPINES
BRUNEI
MALAYSIA
SINGAPORE
INDONESIA
PORTUGUESE TIMOR

UPI

SOUTH KOREA: Protesting the conduct of the June national elections, demonstrators face a determined line of riot policemen in Seoul.


BINH TRONG TU DO
TRUONG CONG CUU
NGUYEN TAN CHUC
VINH HUYEN
NGUYEN HUU KHAI
PHAM HUU NGHI
LE-TRUNG-QUAT
NGO-KHAC-TINH
BA TRAN VY
DAO-TRINH-BINH

LIM THANH VAN, FROM UPI

SOUTH VIETNAM: A rice farmer near Saigon takes time out to examine a poster describing the candidates and explaining how to vote in the elections held on September 3.

SOUTH VIETNAM: A detachment of troops from Thailand disembarks in September at a port near Saigon to aid allied effort.

FRANK JOHNSTON, FROM UPI

In terms of international politics, perhaps the most interesting development of the year was the de-emphasis in U. S. official statements on merely defending South Vietnam's independence, and the stress placed on containing Chinese Communist aggression. This was the theme of Secretary of State Dean Rusk's much-noted October 12 press conference. (See also FOREIGN POLICY OF THE UNITED STATES; VIETNAM WAR.)

China. In mainland China the disorders and ambiguities of internal politics, that had become so prominent in the summer of 1966 with the activities of the Red Guards, continued virtually unabated. Their significance was not easy for even experts to summarize. Various provinces and cities (notably Canton) were reported as scenes of armed struggles against Red Guards or against the central government. Broadly speaking, however, what mattered was that Mao Tse-tung apparently remained in control, having ridden out the storm created by his drastic purge of the Chinese Communist party. The exuberance of the Red Guards was curbed by Mao in the course of 1967, and he seemed more inclined to turn to the army for support.

The political melee inside China has to be set against the fact that the 1967 harvest was quite good and that Chinese technology, and particularly weapons development, continued to advance rapidly. A hydrogen bomb was tested in June. If China was viewed by its neighbors as a less attractive model to follow, there was nevertheless increasing apprehension on the score of its military capacity. Evidence of Chinese power and fear that it might be used provoked a U. S. decision to build a partial anti-ballistic missile system (see MISSILES).

Chinese Policy. Certainly in 1967 the Communist Chinese government acted and spoke in complete disregard of the feelings of any other state, Communist or not. Indeed, its behavior disrupted all the patterns and conventions of normal behavior among sovereign states. At the celebrations of China's National Day (October 1) hostile references in official speeches to the Soviet Union caused Soviet representatives, as well as those of Mongolia and most of the eastern European countries, to walk out. In Peking diplomatic immunity was discarded as British, French, Russian, and other representatives suffered mob humiliation and physical violence.

The British were the main targets of these policies. On May 24 the British representative in Shanghai and his family were intimidated by a mob, and in September the British mission's Shanghai offices were confiscated. In London, members of the Chinese embassy staff fought police in August.

Activities in Hong Kong. More serious than these incidents was the terrorist campaign that the Chinese Communists mounted against Hong Kong, beginning on May 11. The British crown colony of 4 million people, whose mainland territories have a common border with China, was the target of daily outrages, in which bombs killed or wounded scores of people. There were also border incidents involving the kidnapping of British officials. Presumably, the objective was to give China the kind of control over Hong Kong that it has exercised since 1966 over the still nominally Portuguese colony of Macao.

Yet there were ambiguities in the situation. Throughout the terrorist campaign Hong Kong's New Territories (the mainland section and small offshore islands) continued to derive its water supply from China, and much of Hong Kong's food supply came from the same source. Hong Kong in 1967 proved a much harder nut to crack than had Macao. The structure of government and police in the crown colony did not break down. Yet tourism was damaged, and investments were curbed or even reversed. And it was noticeable that Britain was unwilling or unable to make any serious riposte to the Chinese campaign against its rule in Hong Kong.

Japan. Among the most significant results of Mao's ruthless purges within China and of his reckless foreign policy was the alienation of opinion in Japan. The Japanese left, always in a minority, was further discredited by events in China, and the general expectation that Japan's economic relations with China would soon be supplemented by full diplomatic recognition wilted. Prime Minister Eisaku Sato's cool separation of diplomacy and trade seemed likely to be maintained indefinitely.

The economic progress of Japan in 1967 continued to be phenomenal, and perhaps too little noted in the West. Japan has already passed West Germany to become the world's third-largest steel producer (after the United States and the USSR). Economists predicted that in two or three years Japan will also rank third in general industrial output and that in a decade the standard of living in Japan will equal the present standard in Britain.

Also little noted was the triumph in the February general election of the pro-Western Liberal Democratic government of Prime Minister Sato, who deliberately chose to fight on a platform of the continuance of the American alliance. As columnist Joseph Alsop wryly noted, a great deal more would have been heard of this election in the United States if Sato had been defeated, or if his majority had been seriously dented.

In late summer Sato embarked on an extensive series of visits to the free nations of the southwest Pacific and Southeast Asia. He was well received in Australia and New Zealand and was in the midst of his visit to the Philippines when his tour was cut short by the death on October 20 of former Japanese Prime Minister Shigeru Yoshida.

It would be naïve to claim that there are no outstanding issues between Japan and the United States. The continued U. S. occupation of Okinawa is a grievance that touches Japan closely. Also, in 1967 there was renewed student rioting in Japan—the most serious since 1960—against U. S. policy in Vietnam.

In the main, however, Japan is stable, prosperous, and pro-Western to an extent that it would have seemed absurd to predict 20 years ago. In an interesting speech at the end of September, Foreign Minister Takeo Miki urged that Japanese foreign policy should aim at the creation of a "special relationship" between Japan and Australia as the springboard to a larger "Asia-Pacific" concept of economic union that would include the United States, Canada, Australia, and New Zealand. It is evident that the ruling Japanese party was recognizing that the country's new role had to be that of a world industrial giant, rather than a purely Asian nation.

Southeast Asia. In the states lying between India and China—other than the two Vietnams—there was little in the way of major change in 1967, but what developments occurred were mildly encouraging. In Cambodia the volatile Prince Norodom Sihanouk, who had severed diplomatic relations with the United States on May 3, 1964, seemed to be again considering whether the independence of his country would not be better served by a more anti-Chinese and more pro-American policy than he has pursued in recent years. Sihanouk has found that the Chinese have not ceased to try to infiltrate his country. At the beginning of October he warned Peking to leave his country alone, dismissed two pro-Chinese ministers, and pointed out that such Chinese policies might push Cambodia into the arms of the United States. The visit of Jacqueline Kennedy to Cambodia in November was presumably without political significance, but could not have taken place in 1966.

Of Cambodia's neighbors to the north and west, Laos continued to be unhappily divided into Communist-held, neutralist, and anti-Communist areas. Thailand, however, drew closer to the United States. The United States has now invested close to $1 billion in Thailand in the shape of a new deepwater port (Sattahip), five major new airbases, and extensive highway and communications networks. These new facilities, which are of great use to the U. S. war effort in Vietnam, are also valuable to the Thais in putting down Communist infiltration in the northeastern provinces. U. S. funds spent in Thailand have been well spent—materially strengthening a nation with a genuine zeal for independence. This is likely to discourage Chinese attack, and should an attack occur, it would be easier to deal with.

In Indonesia the slow and careful moves of the new military regime of General Suharto against the deposed dictator Sukarno finally reached a decisive conclusion. Suharto had taken over Sukarno's executive powers on March 11, 1966, but the latter retained the title of president and an uncertain measure of influence and respect. On Feb. 23, 1967, Sukarno formally handed over presidential power, but not until March 12 did the Indonesian Congress strip Sukarno of all political roles and name Suharto acting president pending elections scheduled for 1968. The new Indonesian regime was necessarily still engaged in the laborious task of trying to repair the ravages of the long years of Sukarno's financial irresponsibility, to restore the country's credit, and to achieve a modus vivendi with its creditors. The pro-Chinese orientation of Indonesian policy that ended with Sukarno's fall from power in 1965 was replaced in 1967 by a virtually complete break with Peking. Relations were "suspended" by the Djakarta government (October 9) after the Indonesian embassy in Peking had been sacked and a retaliatory incident had occurred in Djakarta.

South Asia. There was a minor recrudescence of border warfare between India and China in September and early October. The Indian government reported 86 dead and 165 wounded in battles with Chinese troops in remote passes on the Sikkim-Tibet border. Developments in Nepal, the mountain state lying between Tibet and India, were ominous: Chinese influence there was increasing markedly.

India's internal politics gave rise to fears of increasing loss of stability. In the February general elections the Congress party for the first time suffered severe setbacks, losing some 100 seats and seeing its majority reduced to slender proportions. It also lost control of many state governments. Contrary to some expectations, Mrs. Indira Gandhi was maintained in office as prime minister by parliamentary vote on March 12. In the presidential election on May 6, Vice President Dr. Zakir Husain, the Congress party candidate, was easily elected president; it was noteworthy that he is a Muslim.

Observers of the Indian scene report an increasing listlessness in the government of India, a failure to face serious underlying problems. The most important problems are economic, but separatism in the states is also becoming serious and threatening Indian national unity, always fragile.

The policy of Pakistan under President Mohammed Ayub Khan continued to exhibit the delicate balance customary in recent years: the policy of a Western-trained and basically pro-Western ruler who feels that in any Indo-Pakistani dispute American and British policies always favor India (a neutral) against Pakistan (formally an ally of both), and that therefore good relations with Communist China are absolutely necessary for Pakistan's survival. Ayub Khan's political philosophy and the rationale of his policies were set forth in 1967 in *Friends Not Masters,* an autobiography and political testament rare in that it was written by a head of state and government while in office.

Pakistani leaders were gravely concerned that India might be planning to manufacture atomic weapons. They felt that such a move was entirely unnecessary and that it would alter the whole distribution of power in South Asia.

SEATO. Pakistan partially boycotted the 12th meeting of the Council of the Southeast Asia Treaty Organization, held in Washington, April 18–20. Six states were represented by their foreign ministers, France sent no delegate, and Pakistan was represented only by its ambassador to the United States. The latter dissociated himself from the final communiqué, which spoke of the continuing threat of Communist aggression in Asia.

British Retreat from Asia. A historic milestone was passed on July 18 when the British government announced that its forces in Malaysia and Singapore would be halved by 1971 and that it expected to withdraw wholly from Southeast Asia by the "middle 1970's." On Jan. 16, 1968, Britain announced that it would withdraw entirely from the Far East and the Persian Gulf by the end of 1971. This abdication of an "East of Suez" role marks the end of a British guardianship in the area several centuries old. Far from welcome to the United States, the British retreat will leave America alone —as the sole world power concerned and willing— to uphold order and resist aggression in Asia.

New Asian International Organization. A newcomer to the somewhat crowded ranks of the Asian bodies established to further economic growth came into existence on Aug. 8, 1967. This was ASEAN, the Association of Southeast Asian Nations. The founding document was signed in Bangkok, Thailand, by the foreign ministers of Thailand, the Philippines, Indonesia, Malaysia, and Singapore. The objectives of the association were acceleration of economic growth, cultural development, and social progress. The document also called for mutual assistance in technical, scientific, and administrative fields; better utilization of natural resources; and the study of common problems in trade, transport, and communications.

Since this body is strikingly similar in purpose to several already in existence, it seems reasonable to wait to judge it by its fruits rather than by the pronouncements that accompanied its launching. The continued tendency of world prices of tin, rubber, and other primary Asian products to fall presaged considerable difficulties for the economic growth of these countries.

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ASTRONOMY

THE EARTH, glinting in sunlight, is seen at a distance of 11,367 miles (18,300 km) in this photograph taken on November 9 in an unmanned test flight of Apollo 4. View is of the South Atlantic Ocean.

KEYSTONE PRESS

ASTRONOMY

Major areas of astronomy under increasingly active study in 1967 included the expansion of the universe, the rotation of stars, and X-ray and infrared sources. Within our solar system, U. S. and Soviet space scientists achieved successes with instrumented probes of the moon and Venus.

Expansion of the Universe. One fundamental question in modern astronomy concerns the origin and expansion of our universe of galaxies. (A galaxy is a family of a hundred billion stars, like our own Milky Way.) For 40 years it has been known that the more distant a galaxy is, the more rapidly it moves away from us. The velocity increases about 20 miles (32 km) per second per million light-years.

An atom emits energy at certain wavelengths characteristic of the particular element. The light emitted by such atoms in stars and gas clouds in other galaxies is shifted to longer (redder) wavelengths by an amount roughly proportional to the galaxy's distance. Thus, the red shift would become infinite as the recessional velocity of a galaxy approaches that of light at a distance of about 13 billion light-years. This 13 billion years is an approximate age for our universe, if the expansion rate is constant. Going backward in time, the universe would appear to be contracting and energy to be crowded together in a single dense object. There are many apparent paradoxes in the general theory of relativity, but most observed phenomena connected with such expansion can be rationally explained by general relativity.

For such an enormous, speculative framework, 1967 has been one of radical change, new discovery, and uncertainty. On the theoretical side, Robert H. Dicke of Princeton (in collaboration with Carl Brans) proposed a general theory of relativity different from Einstein's. George Gamow revived an old suggestion by Pascual Jordan and P. A. M. Dirac suggesting that the fundamental observation in question, the red shift, is an illusion caused by changes in the constants of nature with time.

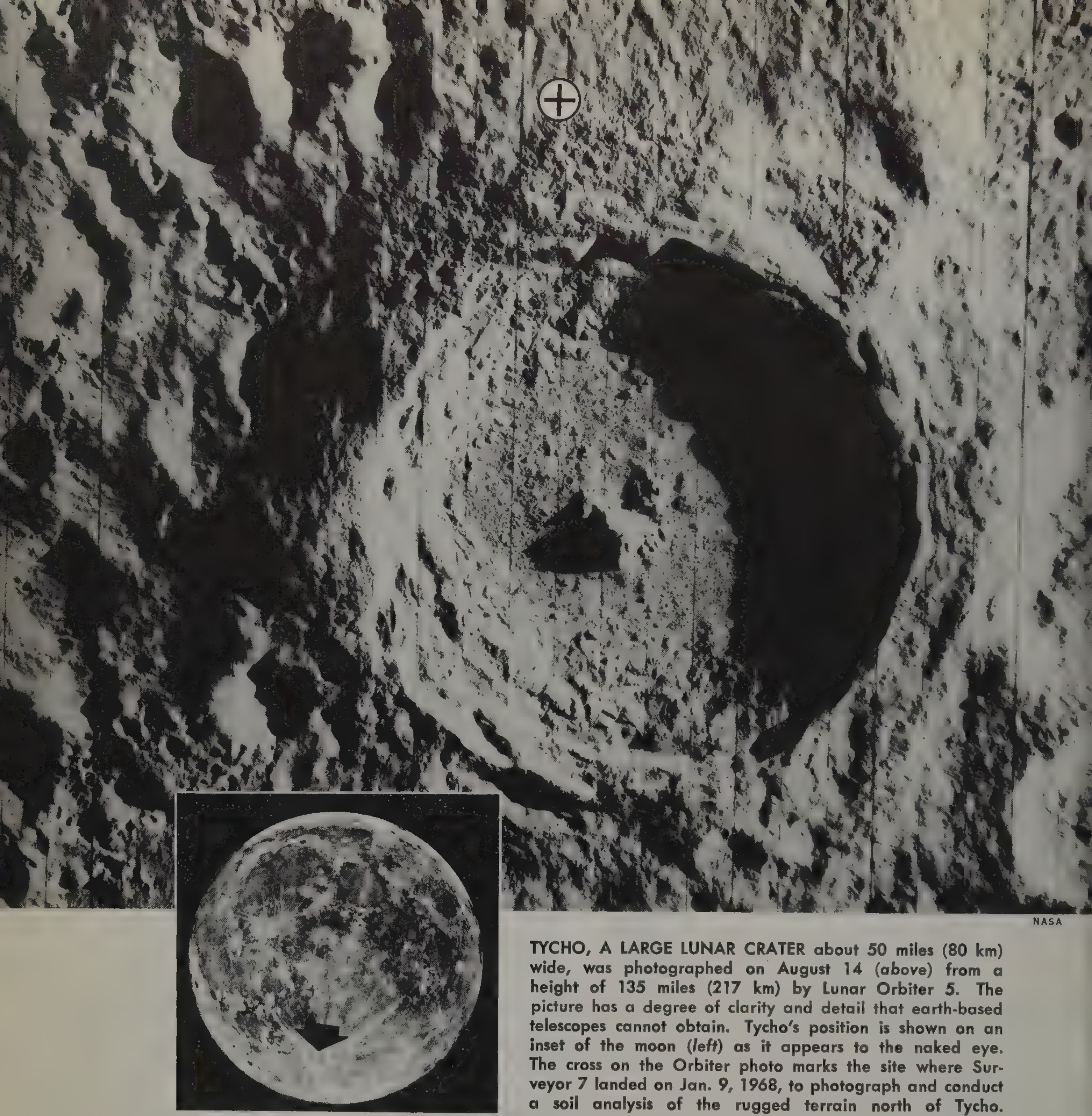
One astronomer, H. C. Arp of the Mount Wilson and Palomar Observatories, suggested that an unknown physical cause produces the red shift in galaxies emitting strong radio signals or in quasi-stellar radio sources (quasars).

On the other side of the argument, the variation of natural constants seems already to have been disproved. The continued work of Allan R. Sandage of Mount Wilson and Palomar has shown a remarkably accurate red shift/brightness relation to hold for the intrinsically brightest, apparently normal galaxies. In addition, less direct evidence is accumulating to indicate that we can now actually observe the dense, hot, early stage of our expanding universe, which is called the "primeval fireball."

The Cosmic Fireball. At present, matter in the universe is spread very thinly; the average density is about one atom per cubic yard. In water, the density is about 10^{30} times higher. If the universe once was 10^{10} times smaller than now, the average density of matter would have been equal to that of water and the entire universe would then have been only a light-year in diameter. Such a dense object,

NASA

MOON'S HIDDEN SIDE was photographed by Lunar Orbiter 5's wide-angle camera on August 6. It differs from the visible side in its relative lack of maria, or "seas."



NASA

LICK OBSERVATORY

TYCHO, A LARGE LUNAR CRATER about 50 miles (80 km) wide, was photographed on August 14 (*above*) from a height of 135 miles (217 km) by Lunar Orbiter 5. The picture has a degree of clarity and detail that earth-based telescopes cannot obtain. Tycho's position is shown on an inset of the moon (*left*) as it appears to the naked eye. The cross on the Orbiter photo marks the site where Surveyor 7 landed on Jan. 9, 1968, to photograph and conduct a soil analysis of the rugged terrain north of Tycho.

no matter how hot, would be opaque and act like a single superstar.

But, expanding at nearly the velocity of light, its density would drop to that of air in 10 years. At an age of about 10 million years and a temperature of about 5000° F (3000° C) it would become transparent, releasing its enormous heat and light. From then on, the light that had existed in the cosmic fireball would travel in all directions into space. Originally brilliant and of high effective temperature, the light would be red shifted so as to appear at larger and longer wavelengths because of the expansion of the universe.

If this theory is correct, everywhere in the universe, equally strong in all directions, we should see the light of the primeval fireball, now faint and greatly red shifted. In round numbers, the expansion ratio between now (10 billion years) and the time when the universe became transparent (10 million years) is about 1,000, so the original radiation should now appear at 1,000 times longer wavelengths, or the radio-wave part of the electromagnetic spectrum.

Advances in radio astronomy now permit the detection of very weak signals. The radio astronomers at Bell Telephone Laboratories and Princeton agree that they have detected an otherwise unexplained signal, corresponding to this fireball radiation. It is referred to as the 3° radiation because its energy distribution corresponds to that of an ideal (black body) radiator at a temperature of 3° K (degrees absolute, about −450° F, or −270 °C). This radiation has been measured at different wavelengths. The signals have the same strength in every direction. Thus, they cannot come from our solar system or galaxy. If there are no instrumental errors, such as unknown sources of receiver noise, the 3° radiation must come either from a background of very distant, unseen galaxies, or from the remains of the cosmic fireball. Such a direct observation, if confirmed, will establish definitely the concept of an expanding universe that was once very small.

Rotation of Stars. Another active field of astronomical study is concerned with the evolutionary status and importance of the rotation of stars. Most galaxies rotate and have complex forms that depend on their varying amounts of rotational angular momentum. In our own Milky Way, stars near the sun rotate at 200 miles (about 300 km) per second around the galactic center, 30,000 light-years distant. But gas clouds rotating around a distant center must have appreciable internal rotation.

An interstellar gas cloud a light-year in diameter may contain enough matter to form a star like the sun, but must shrink to one ten-millionth its original size to do so.

If the cloud's rotational angular momentum is conserved, the star would spin rapidly enough to disrupt itself. Thus the formation of stars in a rotating galaxy becomes difficult, unless a mechanism exists for disposal of angular momentum. This does not mean that the galaxy can violate one of the fundamental laws of mechanics, but that additional forces and processes are needed.

One suggested process involves both planet formation during the birth of a star and magnetic fields, which are known to exist in interstellar gas. Another idea involves magnetic fields with the continued ejection of matter from the star's surface, just as there is a "solar wind" continuously blowing the hot solar corona outward.

Observational facts on stellar rotation have been accumulating for 30 years, beginning with the work of Otto Struve and G. A. Shajn. The most startling fact is that stars with surfaces hotter than the sun by 1000° C or more can rotate rapidly, up to 400 miles (600 km) a second, while cooler stars rotate at 3 miles (5 km) a second or less. Why should surface temperature have anything to do with rotation at all? Another startling fact about the slow rotation of cool stars is shown by the distribution of the angular momentum in the solar system itself. The planets have only a few percent of the mass of the solar system, but over 98% of the angular momentum. To explain this unusual observation, Fred Hoyle of Cambridge University and collaborators suggested that during star formation the magnetic fields carry gas outward into a thin rotating disk, within which solids form eventually to become the planets. The disk would contain most of the angular momentum, and the sun at the center would be nearly rotation free.

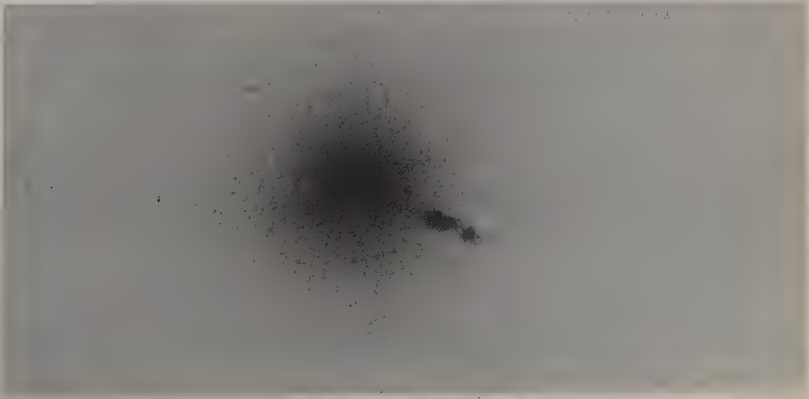
To explain why only cool stars would be slowed down, theoreticians, starting with Evry Schatzman of Paris, noted that there is a fundamental difference in the structure of the outer envelope of stars with surfaces below 10,000° F (6000° C). The outer half of a cooler star like the sun is unstable, and hot gases circulate outward in a process called convection. These convection currents transport angular momentum from the center to the surface. In addition, the surface becomes unstable and heats the outer layers of the sun, the chromosphere, and the corona. The solar wind then blows outward past the planets. In a period of several billion years it could slow the sun down from a rapid initial rotation, according to I. A. Roxburgh.

The astronomical evidence for this slowing down of cool stars has been assembled by R. P. Kraft and A. J. Deutsch of Mount Wilson and Palomar in California. Moreover, Kraft found that recently formed stars as cool as the sun in the very youngest clusters still rotated rapidly.

Deutsch has found unusually high rotation in certain evolving old stars, suggesting that only their surface layers may have been slowed down and that even cool stars still rotate in their interiors. Perhaps even the sun is still rapidly spinning.

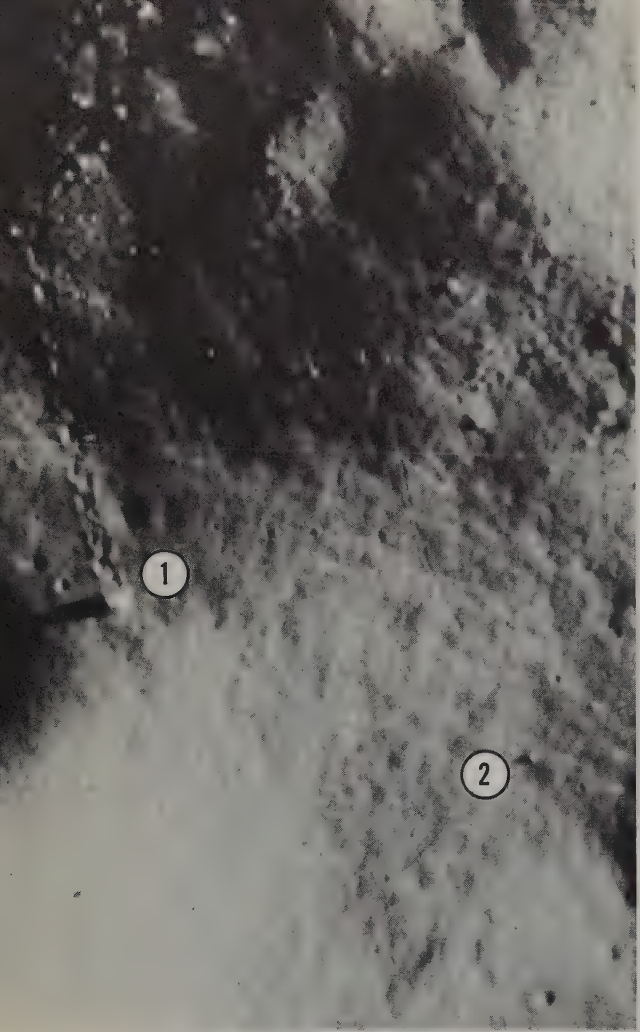
Can the sun's interior be rapidly rotating? The surface rotates in 27 days at the equator but with a longer period at the poles. H. H. Plaskett of Oxford claims to have found currents and winds in the atmosphere that require that the period of rotation below the convection zone and near the center be about 12 hours. If so, the angular momentum of the sun would be like that of hot stars with rapid surface rotation and comparable to that of the planetary system. The gas expelled from the sun with initially rapid rotation would have successfully formed the planets. If the solar core is in rapid rotation, it will be highly flattened and may have observable effects at the surface.

Dicke's new relativity theory then becomes especially interesting. In his theory, the hypothetical flattened core will cause the orbit of the planet Mercury to precess at a rate different from that predicted by Einstein's general relativity. Mercury's observed precession has been known to be slightly less than that predicted by general relativity. The flattened core should also result in a slightly flattened surface. Dicke and collaborators have made very precise and delicate measurements of the ratio of the polar to the equatorial diameter of the sun. They find slightly more flattening than would be caused by its slow surface rotation. Further detailed study of the sun and of the rotation of the stars may provide additional tests of theories of general relativity, leading in turn to new advances in cosmology.



MOUNT WILSON AND PALOMAR OBSERVATORIES

RADIO GALAXY M87 has tentatively been identified as a strong source of X rays. A luminous jet of high-speed particles extends from this "peculiar" galaxy. The photo is printed as a negative in order to accentuate details.



NASA

TRACKS LEFT BY LUNAR ROCKS (1 and 2) when they rolled down a slope were recorded by Orbiter 5. Rock 1 is about 75 feet (23 meters) wide. Study of such photos adds to knowledge of the properties of lunar surface material.

X-Ray Astronomy. Identification of areas in the sky that are strong sources of X-rays was made in 1967 during rocket flights. A possible identification with two strong radio sources has been suggested by a Naval Research Laboratory team. If correct, these results indicate that nearly as much energy is radiated in the X-ray wavelengths as in light by Messier 87, a peculiar galaxy, and by 3C 273, a quasar; X-rays from the sun are less than one millionth as strong as is the light.

Two peculiar stars in our galaxy also have been identified and found to emit more X-rays than light. Their brightness varies rapidly within a few minutes. Their spectra show that they are in rapid orbital motion, immersed in very hot gas at almost 90,000,000° F (50,000,000° C), from which some of the light and all the X-rays come. One suggestion is that the stars are close doubles and in some short-lived stage in the evolution of a nova, or exploding star. Another is that one star may be a "neutron star," an object with the mass of the sun but only 10 miles (16 km) in diameter.

Numerous X-ray sources have been located approximately from rocket flights by teams of scientists at Lockheed and at American Science and Engineering. Most seem to lie in the Milky Way, their energetic X-rays penetrating the haze of gas and dust that obscures the visible light of distant stars in the galaxy. It will soon become possible to estimate the distance to the X-ray sources from the spectrum of the X-rays that reach us, since long-wavelength X-rays are heavily absorbed.

On March 8 an X-ray experiment was carried on OSO 3, an orbiting solar observatory, to monitor solar activity. The Goddard Space Flight Center group found that X-rays strengthened by nearly a factor of 10 during a solar flare. The spectra obtained indicated that iron atoms in the sun's chromosphere had all but one or two of their 26 electrons stripped off by the very high temperature at the outburst of a flare.

Infrared Astronomy. New techniques have been developed for detecting weak sources of infrared radiation, in the wavelength range from 1 to 15 microns, and also at one millimeter wavelengths. Cool, red variable stars were found, with apparent temperatures as low as 1000°; other stars were detected highly reddened by interstellar dust. In addition, new types of objects have been detected by Harold Johnson, Frank Low, and their collaborators. Stars now being formed in dense clouds of dust and gas were shown to emit most of their energy in the infrared wavelengths. Inside the Orion nebula, a small, infrared, starlike object was detected with an effective temperature of only 610° K (337° C), and a nebula was found with a temperature of only 70° K (−203° C). In addition, the starlike nucleus, or center, of our Milky Way was found by infrared light. It is reddened by dust clouds that transmit only one billionth of its visual light, so that it had never been seen on ordinary photographs.

Scientific Satellite Research. Two solar observatories were successfully launched in 1967. OSO 4, launched October 18, included the Harvard ultraviolet spectroheliograph, a device that produces a picture of the sun in the light of any desired atom. The low layers of the solar envelope are relatively cool, 10,000–50,000° K; the outer corona is 2,000,000° K. Different atoms produce light at these different temperatures, and OSO 4 mapped their distribution.

Lunar photographic missions in 1967 provided both beautiful pictures and greater detail about the pockmarked lunar surface. Clearly, not all lunar features are produced by meteoritic bombardment; lava flows, slides, and faults have been detected similar to those on earth. The U. S. Surveyor probes have analyzed the chemical composition of lunar surface material by nuclear bombardment of its atoms. A box containing radioactive material was lowered to the surface from the Surveyor, and the characteristic radioactivity induced in the surface rocks was then measured. The U. S. photographic program has been completed successfully, fully defining the qualities of the moon's smoother areas.

The USSR's Venus 4, launched on June 12, dropped a capsule through the atmosphere of Venus, confirming the very high temperatures near the surface. (Radio observations had given nearly 700° F, or 370° C.) A day later the U. S. flyby probe Mariner 5 passed behind Venus to measure its upper atmosphere by radio techniques.

(See also SPACE EXPLORATION.)

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ATMOSPHERE RESEARCH

Atmosphere research in 1967 provided further data that increased man's understanding of rainfall, clear air turbulence, auroras, and tornadoes.

Origin of Ice Nuclei. Researchers continued their efforts to find out more about how rain forms in the atmosphere. In one theory of rain formation ice-crystal growth occurs in a cloud of supercooled droplets when water vapor is in equilibrium with liquid water, and aerosol particles are present to serve as nuclei for the growth of the ice crystals. These nuclei in the atmosphere apparently are provided by small particles of natural materials that rise from the earth's surface; by particles of extraterrestrial material, such as fragments of meteors; and by man-made aerosols, such as those that contribute to air pollution.

Evidence is mounting that the particles that serve as nuclei are primarily of extraterrestrial origin. In 1938 the German meteorologist Walter Findeisen first suggested that the fragmentation of meteors during entry into the atmosphere provides particles that serve as ice nuclei in the troposphere. In 1956 the Australian scientist E. G. Bowen, using worldwide rainfall records representing 20 years of observations, suggested that days of maximum rainfall occur 30 days after meteor showers. There has been a great deal of doubt about Bowen's hypothesis. In 1967, however, J. Rosinski of the National Center for Atmospheric Research at Boulder, Colo., reported the results of observations that showed that ice nuclei concentrations were higher during periods corresponding to the peak rainfall dates that fit Bowen's hypothesis. These results also seemed to indicate that meteor particles do serve as nuclei for some ice crystals, as suggested by Findeisen and Bowen.

Clear Air Turbulence. After the introduction of high-speed, swept-wing aircraft that fly at high altitudes, it was recognized that clear air turbulence was detrimental to flight safety. In several cases, loss of aircraft control, structural damage, and passenger or crew injuries were caused by clear air turbulence that buffeted the aircraft. Such cases made it evident that there was a need to know more about clear air turbulence, to forecast this disturbance, and to develop detection methods.

One region where clear air turbulence develops is in the lee of mountains, at a considerable distance from them. In 1967, H. P. Foltz of the U. S. Weather Bureau and E. R. Reiter of Colorado State University analyzed measurement data from airborne instruments and showed that standing waves in the lee of mountains have wavelengths ranging from about 10 kilometers to 10 meters. This 10-meter distance also is the size of the air pocket that characterizes regions of clear air turbulence. The correspondence between the measurement data and the size of the air pocket provides evidence that helps in understanding where and how clear air turbulence occurs. This research is a significant contribution toward improved safety in flight.

Auroras and the Ring Current. A completely satisfactory theory of the origin of auroras remains to be given; however, a great deal is now understood. The earth is immersed in the solar wind, which is a plasma of charged particles streaming out from the sun. The magnetic field of the earth has a long tail into which the magnetic field lines are driven by the solar wind flowing around the earth. In addition there is a ring current, consisting of charged particles, which encircles the earth at a distance of about 39,633 miles (63,780 km).

Lines of the magnetic field enclose the ring current on the leeward side of the earth from the sun; these field lines reconnect in a neutral sheet extending downwind in space beyond the earth. Ionized particles from the sun that have small pitch angles with these field lines are accelerated along the field lines and are precipitated into the ionosphere, where they collide with air molecules, which may then emit the visible light to produce auroras. Ionized particles that have large pitch angles are also accelerated, but they remain trapped far out in the geomagnetic field; these particles replenish the outer trapping zone and form the ring current. The trapped particles also cause changes in the ionospheric current system. These changes may provide an explanation for the occurrence of low-latitude red arcs and the blackouts of radio communication signals bounced off the ionosphere.

Electric Currents in Tornadoes. One baffling problem in accounting for the behavior of tornadoes is to identify the source of the energy that accelerates the air to near-sonic speeds. It has been calculated that the energy for this acceleration would require a temperature difference of at least 158°F (70°C). Bernard Vonnegut of Arthur D. Little, Inc., has suggested that electric currents in the funnel-shaped tornado cloud can heat the air sufficiently to produce the near-sonic wind speeds in tornadoes. Observations made at night seem to show that tornadoes do have an unusual amount of electric discharge.

Strong electric currents within a tornado should be accompanied by disturbances in the local magnetic field of the earth. Marx Brook of the New Mexico Institute of Mining and Technology has reported an unusual disturbance of the magnetic field in the vicinity of a tornado.

Very high currents within the tornado are required to explain the disturbance in the magnetic field. Long-duration currents exceeding 400 amperes have been observed in some thunderstorms, but an average thunderstorm usually involves only currents equivalent to a steady current of 1 ampere. One can infer that a tornado is equivalent to several hundred thunderstorm cells that are all active at the same moment.

After it was recognized that tornadoes may be driven by electrical forces, S. Colgate of the New Mexico Institute of Mining and Technology suggested that a tornado might be controlled or destroyed by shorting its electrical energy to ground. Experiments to short out a thunderstorm have not been very successful, but similar efforts to deal with a tornado may be more successful because it has a lower internal pressure and a higher electron concentration than a thunderstorm. One suggestion for shorting out a tornado was to inject a chaff of 4-inch-long (10-cm) fine wire needles into the tornado. Although this proposal seems to be beyond present technology, it offers hope for the future as more is learned about the electrodynamics of tornadoes. A large city threatened with high economic losses by tornado action might find that it is not too costly to undertake emergency measures to discharge the tornado's electrical energy to ground.

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ATOMIC ENERGY

WIDE WORLD

SCULPTURE commemorating the beginning of the atomic age, 25 years ago, was unveiled in December at the University of Chicago. The sculptor, Henry Moore (*far right*), and Mrs. Enrico Fermi, widow of the physicist who led the 1942 experiments in controlled nuclear fission, are among the participants in the unveiling.

ATOMIC ENERGY

As the world marked the 25th anniversary in 1967 of the birth of the atomic era, concern over the nightmare of nuclear weapon proliferation increased sharply. Communist China had developed and tested a hydrogen bomb and was emerging as a major nuclear power. Meanwhile, the United States and the USSR were attempting to convince non-nuclear powers of the need to accept a nuclear nonproliferation treaty. To this end, President Johnson invited the international inspection of all U. S. nuclear facilities except those vital to defense. The nuclear arms race between the United States and the Soviet Union did not abate, however, despite the limited test ban treaty signed in 1963.

Rapid progress continued to be made in the commercial use of atomic energy. The sudden upsurge in construction of nuclear power plants evident in 1966 continued into the new year. On the other hand, budgeting for basic and applied research in atomic energy in the United States became more difficult as the government tried to limit its nondefense spending. Thus the AEC (Atomic Energy Commission) budget for fiscal 1968 was approximately $2.5 billion, of which $715.5 million was allocated for weapons development—an increase of $52 million over fiscal 1967. In addition, $110.5 million was earmarked for plant and capital equipment expenditures for weapons projects.

Curtailment of basic research was not exclusively an American problem. Countries all over the world announced cutbacks in some research projects. It became increasingly evident in 1967 that concern over major problems facing modern society was forcing some reassessment of priorities and redeployment of scientific manpower.

PEACEFUL APPLICATIONS

Several significant test projects were conducted in 1967 in underground excavation by nuclear explosion. Research continued on small isotope-energized power plants that would have applications ranging from lunar power stations to artificial hearts.

Power Production. The use of nuclear power in the generation of electrical energy is becoming commonplace. In 1967, 32 new nuclear power plants were planned in the United States, compared with 21 in 1966. On June 14 the 430-megawatt nuclear generating station at San Onofre, Calif.—the largest commercial nuclear electrical plant in the nation—began operation. The AEC predicts that by 1980 approximately 150,000 megawatts of electrical power will be produced by U. S. nuclear plants.

With the growing commercial acceptance of nuclear power, stringent safeguards on such plants are being enforced by governmental regulating agencies. As air pollution problems increase, industry is expected to develop non-polluting nuclear plants at underground locations or at off-shore island sites near large urban population centers.

The AEC announced a set of research priorities to ensure adequate power-generating facilities for the remainder of the 20th century. Research will be concentrated on liquid metal-cooled fast breeder reactors. In a breeder reactor, plutonium 239 is produced as a by-product of the fission reaction in uranium. Use of this plutonium will result in the extraction of as much energy from one ton of uranium as is obtained from 3 million tons of coal. The energy equivalent in presently operative reactors is only 10,000 to 20,000 tons of coal.

Nuclear electrical production also is increasing in other countries. Great Britain continues to lead in this area; 25 British-designed reactors account for 45% of the world's capacity. The 10 countries using nuclear power in 1967, and their capacity (in megawatts), are as follows: United Kingdom, 3,500; United States, 1,685; USSR, 1,060; France, 995; Italy, 600; West Germany 300; Canada, 220; Japan, 170; Belgium, 130; and Sweden, 10.

Excavation Projects. Prime attention was given in 1967 to Project Gasbuggy, part of the AEC's Plowshare program for developing peaceful uses of nuclear explosions. Project Gasbuggy, which in part was privately funded, was a 26-kiloton nuclear explosion set off on December 10, 4,200 feet (1,275 meters) below the New Mexico desert. Its purpose was to free natural gas trapped in impermeable rock formations. Estimates indicate that such explosions could increase U. S. gas reserves by 317 trillion cubic feet (nearly 9 tillion cubic meters).

Projects Ketch and Sloop are to follow Gasbuggy in the Plowshare series of programs. In Project Ketch, a nuclear explosion would create an underground gas reservoir, 35 miles (56.3 km) northwest of State College, Pa., that could hold 465 million cubic feet (about 13 million cubic meters) of gas. Project Sloop is a proposed underground test that would use a 20-kiloton nuclear device to recover low-grade copper ore deposits 1,200 feet (366 meters) underground near Sanford, Ariz.

Isotope Power Plants. The AEC and the NIH (National Institutes of Health) are cooperating in the development of a radioactive isotope-powered heart assistance device that could be implanted in the human body. The cardiac pacemaker, powered by plutonium 238, weighs about 3.4 ounces (96.4 grams) and has a 10-year life. It is expected to be available in the early 1970's. The even more ambitious undertaking of an artificial heart currently is under feasibility studies by the AEC and the NIH. A tiny four-cylinder engine running a hydraulic pump would be implanted in the user's abdominal cavity, anchored to the pelvis. The conversion of water to steam by isotopic heat would operate the engine, with excess heat dissipated in the blood stream.

Isotopically heated space suits for pilots who must bail out of aircraft in frigid regions are being investigated under AEC contract. The AEC also is interested in developing larger heat sources for Antarctic experiments and underwater laboratory environments. They would be composed of 300 to 400 grams (10.6 to 14.1 ounces) of cobalt 60 and would give off up to 30 kilowatts of thermal energy.

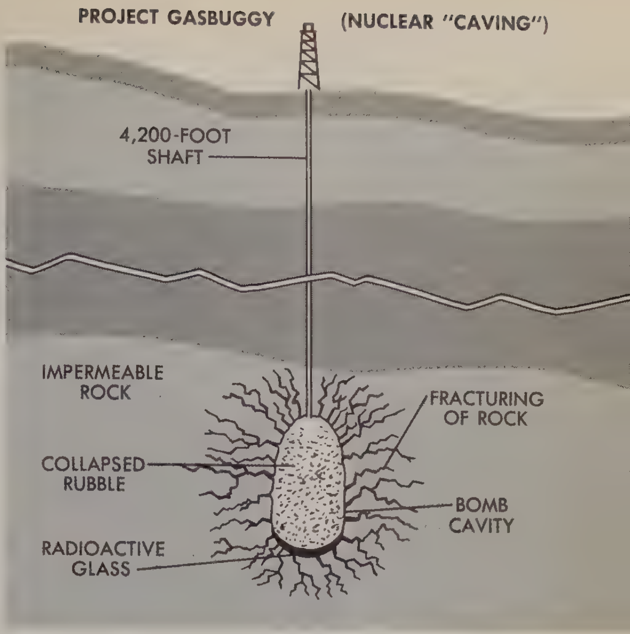
Isotopic electric generators that turn radiation into heat and then into electrical energy by means of the thermoelectric effects are becoming commercially available. They provide maintenance-free power for remotely located devices such as beacon lights and underwater oceanographic devices, and for space and lunar environments.

Radiation Uses. Progress on the application of radiation to the preservation of food was slowed somewhat in 1967 by the cautious attitude of the FDA (Food and Drug Administration), which called for data from two years of animal feedings. Petitions for several kinds of irradiated fish are currently before the FDA, and further testing of strawberries, oranges, and lemons is in progress. The FDA already has cleared canned bacon, white potatoes, wheat, and wheat flour for human consumption.

The FDA and AEC are sponsoring research at the University of Pittsburgh's Graduate School of Public Health on the effects of radiation on sugars, amino acids, and vitamins. Meanwhile the United Nations IAEA (International Atomic Energy Agency) has proposed greater international cooperation in the study of food irradiation to increase the world's food supply. (See FOOD INDUSTRY.)

Nuclear radiation is finding increased use in sterilization procedures and in curing processes that involve the cross-linking of long-chain polymers. In Copenhagen a 10 Mev (million electron volt) linear accelerator sterilizes medical supplies at the rate of 500 pounds (225 kg) of instruments an hour. In England the United Kingdom Atomic Energy Authority is constructing a 300-kilowatt, 0.1-ampere electron accelerator for curing surface coatings; the device produces a 4-foot-wide curtain of electrons.

In the United States low doses of radiation are being used to produce "settling agents" or polymers with extremely high molecular weights. Large amounts of radioisotopes are used in experiments involving the direct conversion of heat to electricity, and for inducing chemical changes in petroleum products. Medical use of tracer isotopes is widespread, and some U. S. hospitals now are considering installation of cyclotrons to produce short-lived medical isotopes. Radioactive tracer isotopes also are being used in diverse ways, from the tracking of air pollutants emitted by factory chimneys to the scanning of diseased body organs.



PROJECT GASBUGGY, a nuclear explosion set off 4,200 feet below the New Mexico desert in December, was designed to release natural gas reserves trapped in the rock.

Nuclear-Powered Transportation. The U. S. nuclear frigate *Savannah*, scheduled to be mothballed in 1967, was rescued by congressional action and will return to the Far East for a third year of charter operation. After refueling in August 1968—four fuel elements are to be replaced—the frigate will return for two more years of commercial use. Germany and Japan soon will join the United States in operating nuclear ships, each nation with a ship of its own.

Interest in the U. S. nuclear-powered aircraft project, suspended in 1961, was revived in 1967 as a result of two factors: the increasing size of commercial aircraft, and the increasing power-to-weight ratios of new reactors. For distances of 5,000 miles (8,000 km) or greater, nuclear planes are capable of bearing larger payloads.

Desalting Project. In July 1967 the former AEC chairman, Lewis Strauss, proposed an international desalting project—one that he believes will hold the key to peace in the Middle East. The proposal involves construction of three multipurpose reactors to provide nuclear power and irrigation water. Two of the units would be located on Israel's Mediterranean coast and one on the Gulf of Aqaba. Each plant would produce 400 million gallons (about 1,500 million liters) of fresh water; the IAEA would be responsible for their operation.

Atoms For Peace Award. The Ford Foundation's $80,000 Atoms for Peace award was presented on November 14 to W. B. Lewis of Canada, I. I. Rabi of the United States, and B. L. Goldschmidt of France. Each of the scientists has been a leader in his country's participation in the IAEA. The Soviet scientist V. S. Yemelyanov had earlier declined a share of the award as a protest against the involvement of the United States in Vietnam.

MILITARY AND SPACE APPLICATIONS

The most important military development in the field of atomic energy in 1967 was the rapid rise of Communist China as a nuclear power.

Chinese Hydrogen Bomb. Communist China detonated its first hydrogen bomb over the Sinkiang desert on June 17. The bomb, described by AEC sources as equivalent to about one megaton of TNT, perhaps was dropped from an aircraft and exploded above ground. It is believed that the Chinese conducted their seventh atomic test on December 25. In spite of China's internal disorders it is apparent that the country's nuclear weapons program is making rapid progress.

In response to these developments, the United States approved construction of a thin anti-ballistic missile system called the Sentinel. Its keystone is the highly classified Spectrum bomb, a one-megaton thermonuclear device that would produce an intense burst of x-rays capable of penetrating and disabling an enemy warhead by upsetting its fusing mechanism. (See also MISSILES.)

U. S. Military Projects. The United States continued its underground testing program and weapons development. Most of the increase in the AEC's military budget is for the development of two new underground test sites one in central Nevada and the other on Amchitka Island, Alaska. Other increases are scheduled for the production of warheads hardened against disruptive radiation from enemy missile defense systems, and expansion of weapons production capabilities at Oak Ridge, Tenn., Rocky Flats, Nev., and Pinellas, Fla.

In June the joint AEC-DOD (Department of Defense) test program called Latchkey was completed. There were four areas of study: AEC weapons development; DOD nuclear effects events; joint AEC-DOD nuclear explosion detection (Project Vela); and the AEC Plowshare program. Also, in order to understand more thoroughly the propagation of neutrons and gamma rays in the atmosphere, operation HENRE (High Energy Neutron Reactions Experiment) was carried out early in the year at the Nevada Test Site. Neutron sources were mounted on towers 27 to 1,500 feet (8.2 to 457.5 meters) above the earth. The results are expected to lead to improved shielding and radiation instrumentation and to a better knowledge of neutron-induced radioactivity for both military and civilian defense purposes.

Rocket Engine Development. In work on nuclear-powered rockets in 1967, emphasis was placed on graphite reactors and engine systems because of graphite's good nuclear properties and excellent structural properties. Budget cuts forced a cutback in the scope of the NERVA (Nuclear Engine for Rocket Vehicle Applications) project. Present planning calls for completion of the NERVA 1 rocket engine, developing 70,000 pounds (31,500 kg) of thrust, by 1975.

Power Sources for Space Use. The AEC's SNAP (Systems for Nuclear Auxiliary Power) series consists both of reactor and of isotope-powered generating systems. SNAP-19, scheduled for flight testing in 1968, is to provide 50 watts of power for the Nimbus weather satellite; the isotope it uses is plutonium 238. SNAP-27 ALSEP (Apollo Lunar Surface Experiment Package), also powered by plutonium 238, should deliver 63.5 watts for a period of over one year. SNAP-29, an advanced system using polonium 210 and delivering about 500 watts, is to be tested in 1969. (See also SPACE EXPLORATION.)

The first isotope-heated life support system passed a 30-day test run at AEC's Mounds Laboratory in 1967. The system uses plutonium 238, and develops 280 watts for a system of water recovery from human fluid wastes. The system, which has obvious space applications, can supply two men for 30 days at 12 ounces (375 grams) of water a day.

BASIC RESEARCH

Developments in basic research in 1967 came principally in research tools rather than in breakthroughs in fundamental knowledge.

New Soviet Synchrotron. On October 9 the USSR announced the start-up of the world's most powerful particle accelerator at Serpukhov, near Moscow—a 70 Bev (billion electron volt) synchroton. A week after start-up an energy of 76 Bev was reached. The accelerator may give the Soviet Union the lead in high energy research. Cooperative arrangements for use of the synchrotron by western scientists of CERN (European Center for Nuclear Research, in Geneva) are being planned, and CERN also has proposed building a 300 Bev accelerator.

U. S. Installations. Funding of the proposed 200 Bev accelerator at the National Accelerator Laboratory in Weston, Ill., is proceeding modestly. The director, R. R. Wilson, proposed building an "expandable" machine with a 2-kilometer (about 1.2-mile) diameter suitable for a much larger 470 Bev machine. The magnets would be run at half power, enabling the accelerator to reach its primary goal of 200 Bev by 1972; extra power supplies could be added later. Another proposal is to use separate magnets for focussing and bending the beam, permitting a smaller beam tunnel and considerably reducing costs.

Other major installations announced by the AEC are a $50 million, one Bev "meson factory" to be constructed at Los Alamos Scientific Laboratory for intermediate energy research; a plasma facility for fusion research, also at Los Alamos; and the Fast Flux Test Facility for fast neutron reactor component testing, at Hanford, Wash.

Scientists at Los Alamos announced construction of the world's smallest reactor, which used only 242 grams (8.5 ounces) of uranium 235 to achieve a chain reaction. The assembly was composed of uranium 235 plates 0.0012 inches (0.003 cm) thick, separated by 0.1244 inch (0.316 cm) polyethylene foils.

Fusion Research. Process toward solving the basic problem of thermonuclear fusion research—the creation of a magnetic "container" for the hot ionized gases—was marked by the achievement of 5% of the full current density required for such a container. Scientists at the Lawrence Radiation Laboratory are proposing a new accelerator that will enable them to reach the full density.

Transuranium Elements. The creation of the heaviest isotope ever made, mendelevium 258, was announced in September by AEC chairman Glenn Seaborg. Scientists at the Lawrence Radiation Laboratory bombarded einsteinium with alpha particles to produce the isotope. Soviet scientists claim to have produced an isotope with atomic weight 260, but the claim has not been widely accepted in the West. (U. S. and Soviet scientists also are in dispute over the element with atomic number 102. The Soviets claim to have produced it first and have named it joliot-curium; U. S. scientists claim prior discovery and have proposed the name nobelium.)

The production of transuranium elements is currently of great interest among U. S. scientists. Private commercial groups are seeking AEC support for the construction of a Van de Graaff accelerator capable of accelerating uranium ions to 1.5 Bev in order to produce relatively stable elements of atomic numbers 114 and 126. These very heavy elements may have lifetimes of about 10 years and can contribute greatly to knowledge of nuclear structure.

Particle Physics. Experiments in high energy physics in 1967 verified two fundamental principles of physics. Scientists at the Deutsches Elektronen-Synchrotron in Hamburg, Germany, through study of the creation of electron-positron pairs, verified that the laws of quantum electrodynamics are valid at distances down to 3×10^{-14} cm. And at Brookhaven National Laboratory, AEC-sponsored research into the scattering of pions by protons showed that the principle of causality is valid down to distances of 10^{-15} to 10^{-16} cm.

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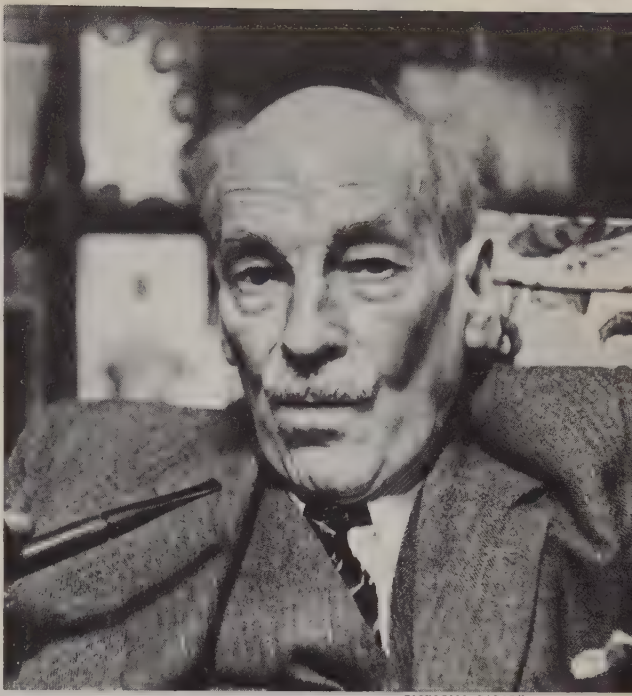

PICTORIAL PARADE

CLEMENT ATTLEE, prime minister of Great Britain from 1945 to 1951, died in October at the age of 84. He is shown here at the time of his 80th birthday, Jan. 3, 1963.

ATTLEE, Clement Richard

British Prime Minister: b. Putney, England, Jan. 3, 1883; d. London, Oct. 8, 1967.

Clement Attlee was prime minister of Britain from 1945 to 1951. Of quiet but undoubted effectiveness, he presided over a far-reaching social revolution in Britain and the liquidation of a large part of its imperial possessions.

Early Life. Attlee was the fourth son of a prosperous London lawyer. He was educated at Haileybury College and Oxford and was called to the bar in 1906. By then he had become deeply concerned with the condition of the poor in England and had exchanged conservative politics for socialism. After service in World War I, he won a seat in Parliament as a Labour member for Limehouse in 1922.

Political Ascent. By 1927, Attlee's interest in British colonial affairs had fully developed, and he was appointed to the commission that laid the constitutional foundations of Indian independence during the next three years. In 1930 he joined the Labour government of Ramsay MacDonald as Chancellor of the Duchy of Lancaster, but in 1931 he declined to serve in MacDonald's coalition government. As one of the few prominent Labourites in Commons to withstand Labour's collapse in the elections later that year, Attlee was thrown unexpectedly into contention for the deputy leadership of his party. His success in obtaining it was partly the result of the expectation that his preferment would be temporary; but when the party leader, George Lansbury, resigned in 1935, Attlee succeeded him.

Party Leader. Attlee was less realistic about foreign affairs than about domestic ones during the first years of his party leadership. He opposed British rearmament until the late 1930's, when he finally changed his position. But after the outbreak of war, as deputy prime minister in the coalition government of Winston Churchill, he adhered completely to the government's policies while simultaneously negotiating bipartisan support for broadly extended social welfare at the war's end.

Premiership. The postwar election of 1945 gave Labour an overall majority for the first time, and Attlee became Britain's second Labour prime minister. From 1945 to 1951 he presided over important welfare innovations, the radical extension of public ownership, and the granting of independence to Egypt, Burma, and India. Unattracted by schemes for European unity, he preferred to seek British economic recovery through U. S. aid and domestic effort.

By 1950 most of Labour's reform program had been enacted. The government's rearmament program, accelerated by the outbreak of the Korean War, led to inflation and to unrest within the party. An election early that year had reduced Labour's majority to 10. To the surprise of no one, the Conservatives won a clear victory in 1951. Attlee remained party leader until December 1955 when, in poor health, he resigned and accepted an earldom.

Character and Accomplishments. Despite a singular lack of charisma, Attlee proved to be a surprisingly good prime minister. His conception of the office did not involve forcing policies on colleagues, but rather coordinating the actions of ministers who, carefully chosen, could be left to do their jobs.

Attlee's political views—as opposed to his general interest in social reform and colonial freedom—were not rigid or easily categorized. That was his great advantage as prime minister, for the fact that he was not closely identified with any party faction enabled him to coordinate and unify. Given the nature of his party and the events of his premiership, he must be accounted one of the most effective, if least dramatic, British prime ministers of the 20th century.

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KEYSTONE

WHILE SWIMMING off Portsea in southern Australia, Prime Minister Harold Holt disappeared on December 17. Rescue and search operations (*above*) proved fruitless, and Holt, an expert swimmer and skin diver, was presumed drowned.

AUSTRALIA

Australia was saddened in late 1967, when Prime Minister Harold Holt disappeared on December 17 while swimming in dangerous surf off the beach at Portsea, Victoria, near his seaside vacation home. Search parties were unable to locate his body and, after two days, the Prime Minister was officially presumed to have drowned. On December 19, John McEwen, deputy prime minister, was sworn in as Holt's temporary successor. Memorial services for Prime Minister Holt, attended by President Johnson and other world leaders, were held in Melbourne on December 22.

John Grey Gorton became the nation's new prime minister on Jan. 9, 1968, when he was elected to the leadership of the governing Liberal party. Gorton was to resign his seat in the Senate to seek election to the seat left vacant by Holt in the lower house, where most legislation originates.

During 1967 the newly reelected Liberal and Country parties' coalition government continued to

UPI

JOHN McEWEN (*left*), Australia's acting prime minister, and U. S. President Johnson attend memorial services for Holt on December 20. Holt was one of Johnson's strongest allies in supporting U. S. policy in Vietnam.

WIDE WORLD

support U. S. policies in Vietnam by increasing its commitment of troops there. No major changes in domestic policy were initiated during the year. In May a national referendum brought passage of two constitutional amendments. An election for the closely divided national Senate was held in November. The opposition Labor party chose E. Gough Whitlam of New South Wales as its new parliamentary leader.

Vietnam War. Australian government leaders emphasized during the year that the situation in Vietnam was improving slowly but steadily. They supported U. S. bombing of North Vietnam, warned against any negotiations which would not assure a "just and lasting peace," and praised internal political and economic improvements in South Vietnam. Policy discussions took place on January 18–22, when South Vietnamese Premier Nguyen Cao Ky visited Australia. Prime Minister Holt visited the United States in June for talks with President Johnson; and in July, U. S. Gen. Maxwell D. Taylor and Clark Clifford, chairman of the Foreign Intelligence Advisory Board, met with Australian officials in Canberra.

Prime Minister Holt announced on October 16 that Australia would increase the number of its troops in Vietnam from 6,300 to more than 8,000.

The Labor opposition called for an end to U. S. bombing in North Vietnam and urged recognition of the National Liberation Front, the political arm of the Vietcong, as a party to any negotiations. The party also recommended transforming the fighting into a holding operation. In February, South Australian Sen. Douglas C. Hannaford resigned from the governing Liberal party to become an Independent because of his opposition to the government's Vietnam policies. Criticism was also voiced by some ministers, trade unions, and student groups.

Australian casualties in Vietnam as of October 1 totaled 139 killed (of whom 49 were draftees) and 543 wounded. Of the 6,345 troops in Vietnam on October 1, more than 2,000 were draftees.

Foreign Aid. Australia increased its foreign economic aid for 1967–68 to $159 million, a rise of nearly 15% over the 1966–67 rate. The program included $5.8 million for special assistance to Indonesia and $9.3 million for the International Development Association, an affiliate of the World Bank that assists underdeveloped countries. Australia gave $10 million worth of wheat to India and a similar amount to an international food assistance program. South Vietnam received $2.2 million for water systems, road-building equipment, a resettlement center, medical centers, and textbooks.

Economy. Government and private spokesmen were optimistic about Australia's economic growth during the 1967 fiscal year. The gross national product for 1966–67 increased by 9% over the previous year, and total employment was up by 2.5%.

AUSTRALIA • Information Highlights

ASIA
AFRICA

Area: 2,967,909 square miles (7,686,893 sq km).
Population: 11,540,764 (1966 census).
Chief Cities (1966 census): Canberra, the capital, 92,199; Sydney, 2,444,735; Melbourne, 2,108,499.
Government: *Governor-General*—Richard Gardiner Casey, Lord Casey (appointed July 29, 1965); *Prime Minister*—John Grey Gorton (took office in January 1968). Parliament—House of Representatives, 123 members (party seating, 1968: Liberal and Country coalition 81; Labor 41; Independent 1.); Senate, 60 members (party seating, 1968: Liberal and Country coalition 28; Labor 27; Democratic Labor 4; Independent 1.).
Religious Faiths: Anglicans, 35% of population; Protestants, 26%; Roman Catholics, 25%; Jews, 1%; others, 13%.
Education: *Literacy rate*, 99% of population (excluding aborigines). *Total school enrollment* (1964)—2,619,074 (primary, 1,634,569; secondary, 731,905; technical, 130,000; higher, 122,600).
Finance (1966 est.): *Revenues*, $4,966,600,000; *expenditures*, $4,850,600,000; *public debt*, $11,819,900,000; *monetary unit*, Australian dollar (.9007 dollars equal U. S.$1).
Gross National Product (1966): $22,653,000,000.
National Income (1966): $18,331,500,000; average annual income per person, $1,588.
Economic Indexes (1965): *Industrial production*, 156 (1958=100); *agricultural production*, 144 (1956–57=100); *cost of living* (1966), 119 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 5,892,000; gasoline (1965), 5,165,000; cement, 3,684,000.
Crops (metric tons, 1966-67 crop year): Wool, 441,900 (ranks 1st among world producers); wheat, 12,570,000 (world rank, 4th); oats, 1,125,000; barley, 1,213,000.
Minerals (metric tons, 1966): Lead, 367,200 (ranks 2d among world producers); coal, 33,912,000; lignite, 22,140,000; iron ore, 11,604,000; bauxite, 1,813,000; gypsum (1965), 860,000; crude petroleum, 430,800; zinc ore, 370,800.
Foreign Trade (1966): *Exports*, $3,134,000,000 (chief exports: wool, $890,022,000; wheat, $285,082,000); *imports*, $3,217,200,000 (chief imports, 1965: nonelectrical machinery, $613,099,200; textile yarn and fabrics, $278,051,000). *Chief trading partners* (1965): Britain (took 20% of exports, supplied 26% of imports); U. S. (took 10% of exports, supplied 24% of imports).
Transportation: *Roads* (1965), 550,000 miles (884,950 km); *motor vehicles* (1965), 3,767,287 (automobiles, 2,894,705); *railways* (1965), 24,933 miles (40,117 km); *merchant vessels* (1966), 105 (619,000 gross registered tons); *principal airports*, Adelaide, Brisbane, Canberra, Melbourne.
Communications: *Telephones* (1966): 2,810,833; *television stations* (1965), 52; *television sets* (1965), 1,954,000; *radios* (1965), 2,524,000; *newspapers* (1965), 61.

AUSTRALIAN NEWS INFORMATION BUREAU

JOHN GREY GORTON, senator from Victoria and minister for education and science, became prime minister of Australia on Jan. 9, 1968, when he was elected leader of the governing Liberal party, a post left vacant in December 1967 by the death of Harold Holt. Gorton was expected to continue his predecessor's policy of supporting U. S. action in Vietnam.

Born in Melbourne on Sept. 9, 1911, Gorton was reared in the state of Victoria, where his father owned a fruit farm. He attended Geelong Grammar School and was an honors graduate in history of Brasenose College, Oxford. In 1935 he married an American girl, Bettina Brown of Bangor, Me. After serving with distinction in the Australian Air Force during World War II, he entered politics in 1946 and, as a Liberal, gained a Senate seat from Victoria in 1950. In 1958 he was named minister for the navy, the first of his seven cabinet posts, by Prime Minister Menzies. Gorton, who retained his seat in the Senate from 1950 to 1968, served as minister assisting the prime minister from 1963 to 1966. He is identified with the left wing of the Liberal party.

Consumer spending climbed about 7%. Prices increased at an annual rate of 2% during the first three quarters of the year but were up to a 5% rate in the final quarter.

Wage rates became a major issue in January when a decision by the conciliation and arbitration commission increased margins above the basic wage by amounts ranging from 33 cents to $1.45 a week. In an important decision on June 5, the commission voted to abandon the long-established practice of fixing a basic wage and adding margins for skill and other factors. It adopted a policy of fixing a "total wage" and raised wage rates by $1.12 a week for all workers. In October the high court began hearings on applications from trade unions seeking to invalidate the arbitration commission's decision.

Australian farmers, in a dramatic recovery from the disastrous drought of 1966, produced a record wheat crop in 1967 and replaced more than half of the sheep that had been lost in the drought. However, following a severe drought in the southeast at the end of the year, Australia's wheat board predicted that the nation's 1967–68 wheat harvest would be only half of the 1966–67 crop.

A rise in automobile production followed increased buying in late 1966. The Ford Motor Company produced its one millionth vehicle and announced plans to increase production. The Japanese Toyata firm began producing automobiles at the rate of 5,000 annually.

Mineral production increased by 14% in 1966–67, with important developments in the production of natural gas, iron ore, and crude petroleum. The Broken Hill Proprietary Company, an Australian-owned oil firm, reported a record profit increase of 17%.

On the negative side, the closing of the Suez Canal brought an increase in the price of gasoline. A major drought in Tasmania in February produced the worst forest fires in the island's history and a serious shortage of hydroelectric power. Floods in northern Queensland and parts of central Australia in March damaged sugarcane fields and washed out railway lines.

Although the 1966 overseas trade deficit was replaced by a surplus of $95,000,000 in 1967, foreign aid and other factors resulted in a loss of $177,000,000 in external reserves. For the first time, Japan was the leading importer of Australian products, followed by Britain and the United States. Following the Kennedy Round of tariff-cutting negotiations, a new 3-year international wheat agreement provided for an increase of 19 cents per bushel in the minimum export price.

Government Finance. Treasurer William McMahon introduced a record budget for 1967–68, although the 9.5% increase in expenditures was less than in 1966–67. Defense expenditures were increased by 18%, compared with 27% in 1966–67. The only important increase in social service benefits provided additional payments under the child endowment system for persons with four or more children. Because the budget was expected to promote private development, a revenue increase of 8% with no increase in taxes was anticipated. Dependents' allowances for income taxes rose slightly, as did the amount of tax-free income allowed for persons on old-age pensions. Increased postal rates included a raise from 4 to 5 cents for first-class letters, and there were increases in telephone and telegraph charges. These increases had previously been defeated by the Labor and Democratic Labor parties in the Senate.

Decimal Currency. On August 1, six months ahead of schedule, the government issued regulations which required all contracts to be prepared on the basis of the decimal currency introduced in 1966. By this date all but 3% of the country's business machines had been converted to the new system. The government announced that all transactions were to be on a decimal basis, although equivalent denominations of the old currency would continue to be accepted until they were replaced.

Elections. The governing coalition of Liberal and Country parties failed to regain a majority in the Senate elections of November 25. In the election for half of the members of the Senate, the results produced 28 seats for the government parties, 27 for Labor, four for Democratic Labor, and one independent. Campaign issues included the Vietnam war and a wide variety of domestic problems.

In a national referendum held in May, Australian voters approved two amendments to the constitution that provided for the inclusion of members of the nation's aboriginal population in the national census and gave Parliament specific legislative power regarding the 50,000 aborigines. On July 22 the Labor party won a special election in a district in Victoria which the Liberals had held since 1949.

On April 29, voters in the northern third of New South Wales rejected by a 10% margin a proposal to create a new state to be known as New England. On May 3 a state election in Victoria produced an increased majority for the governing Liberal party.

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AUSTRIA

The matter of gravest concern in Austria in 1967 was the sluggishness of the economy. Settlement of the South Tyrol border problem with Italy ran into new difficulties because of renewed terrorist outbreaks. Negotiations for Austrian membership in the Common Market also remained stalemated. Improved relations with other Danubian countries were a bright spot in an otherwise rather dull year.

Politics. The Socialist party on February 1 elected Bruno Kreisky, a former foreign minister, to succeed Bruno Pittermann as chairman of the party. Kreisky's immediate task was to heal the rather sharp differences which had developed within the party. The Socialists protested Archduke Otto of Habsburg's extended tour of East Tyrol in July, but the visit had no serious political repercussions.

Economic Development. Overall production figures for the first six months of 1967 showed an increase of 2.2%, down from 5.2% in 1966. Excluding agriculture, the economic growth rate was a discouraging 1.7% compared with 5.5% in 1966. All estimates indicate that the growth rate of the gross national product would be the lowest of the postwar years.

The cost of living continued to rise, increasing 4.5% in the first quarter and 2.8% in the second. There was also a slight increase in unemployment. However, the foreign trade deficit, compared with that in the first six months of 1966, decreased because of an increase of 6.9% in exports and a decline of 0.5% in imports. This still left an unfavorable trade balance of −18%. The government exacts a levy of 3% of the invoice value of all imported or exported goods as a foreign-trade-promotion fee. At present the Austrian economic chamber has 88 trade-promotion centers abroad. Since 1950 the Austrian government has supported the financing of exports, and during the year the ceiling for government guarantee of export transactions was raised from 6.5 million to 10 million schillings.

As a spur to the Austrian economy, a reform of the wage and income tax system was enacted, partly effective Oct. 1, 1967, and partly on Jan. 1, 1968. In a major reorganization of the nationalized industries, a new Austrian Industry Administration (OeIG) has been set up to manage the various industries as a whole.

Transportation. The last stretch of the superhighway connecting Vienna and Salzburg opened on May 12. Also the Felber-Tauern Alpine highway between Mittersill and Matrei in Tyrol was opened to traffic on June 25. This road reduces the highway mileage between south Germany and the Adriatic coast by more than 60 miles (96 km).

International Affairs. On April 11 the United Nations accepted Austria's plan to erect an international center to house the permanent headquarters of the United Nations Industrial Development Organization. The new center, to be built on reclaimed land on the north bank of the Danube, across from Vienna's inner city, will also accommodate the International Atomic Energy Agency, located in the Austrian capital since 1953.

At the request of UN Secretary-General U Thant, the Austrian contingent serving with the UN Forces in Cyprus extended its tour of duty to December 26.

On June 25 terrorist activity broke out again along the Austrian-Italian border; four Italian soldiers were killed by a bomb and Austrian frontier guards were attacked. The Austrian government dissociated itself from the terrorist activity and sent two army battalions to strengthen its border patrol. However, the Italian government notified its partners in the European Coal and Steel Community and the European Economic Community that it would oppose Austrian association with those organizations until Austria took steps to prevent terrorists from using its territory as a base of operations.

A new 5-year trade agreement was concluded with Czechoslovakia, and a 1-year agreement with Bulgaria. About one third of the roughly 200-mile (322 km) border between Austria and Hungary has been cleared of mines, and Hungary has promised to complete the task within two years. Also indicative of Austria's improved relations with the other Danubian states was the request made of Austria, and willingly acceded to, to represent the interests of Bulgaria, Czechoslovakia, and Yugoslavia after those countries broke diplomatic relations with Israel as a result of the Israeli-Arab conflict in June.

President Franz Jonas traveled to Thailand (January 16–26) and to Canada (May 8–16), where he led the observance of Austrian national days at Expo 67. Chancellor Josef Klaus made official visits to Moscow, Budapest, and Bucharest.

E. C. HELMREICH
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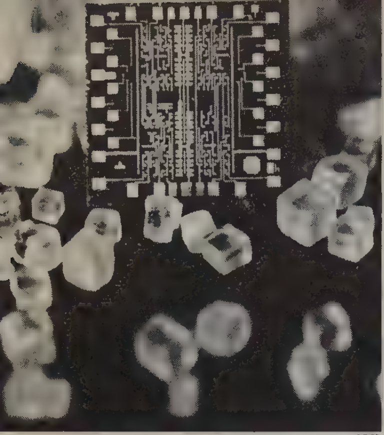
AUSTRIA • Information Highlights

Area: 32,374 square miles (83,849 sq km).
Population: 7,290,000 (July 1, 1966 est.).
Chief Cities (1964 est.): Vienna, the capital, 1,638,584; Graz, 248,620; Linz, 202,199; Salzburg, 114,472.
Government: *President*—Franz Jonas (took office for 6-year term June 9, 1965); *Chancellor*—Josef Klaus (took office April 2, 1964). *Federal Assembly*—National Council, 165 members (party seating 1967: People's party, 85; Socialists, 74; Freedom party, 6); *Federal Council*, 50 members.
Religious Faiths: Roman Catholics, 90% of population.
Education: *Literacy rate*, 98% of population. *School enrollment* (1964)—1,118,224.
Finance (1966 est.): *Revenues*, $2,602,000,000; *expenditures*, $2,700,000,000; *public debt*, $1,071,000,000; *monetary unit*, schilling (25.91 schillings equal U. S.$1).
Gross National Product (1966): $10,057,000,000.
National Income (1966): $7,571,000,000; average annual income per person, $1,038.
Economic Indexes (1966): *Industrial production*, 165 (1956=100); *agricultural production* (1965), 138 (1956–57=100); *cost of living*, 128 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 3,192,000; beer (1965), 689,600; gasoline (1965), 644,000.
Crops (metric tons, 1966–67 crop year): Potatoes, 3,007,000; sugar beets, 2,150,000; wheat, 897,000.
Minerals (metric tons, 1966): Graphite (1965), 94,529 (ranks 2d among world producers); lignite, 5,280,000.
Foreign Trade (1966): *Exports*, $1,690,000,000 (chief exports, 1965: iron and steel, $215,326,000; wood, lumber, cork, $125,398,000; yarn and fabrics, $124,645,000); *imports*, $2,336,500,000 (chief imports, 1965: nonelectrical machinery, $300,134,000; automobiles, $133,495,000; coal, $91,804,000). *Chief trading partners:* West Germany and Italy.
Transportaton: *Roads* (1964), 20,645 miles (33,224 km); *motor vehicles* (1965), 890,892 (automobiles, 789,744); *railways* (1965), 4,094 miles (6,587 km).
Communications: *Telephones* (1966): 1,008,693; *tv stations* (1965), 18; *tv sets* (1965), 711,000; *radios* (1965), 2,154,000; *newspapers* (1965), 36 (circ., 1,806,000).



INTEGRATED CIRCUIT chip of 55 logic circuits was fabricated from masks in an automated process that cut the time required by a factor of ten. Size of chip is indicated by crystals of common table salt in foreground.

IBM

AUTOMATION

A computer census taken in the United States in May 1967 showed 46,000 installations in operation, with another 26,000 on order. In 1964 there were approximately 20,000 operating computers. Thus, in three years the number of computers in use in the United States more than doubled.

Widespread Use of Computers. As the number of computers being used mounts, so do the uses to which the machines are being put. There are currently over 1,000 specific computer applications, and more are being added as programmers develop and refine techniques. Among the primary uses for these machines, for example, computers are now being used for attendance records, cost accounting, market research, production scheduling, traffic control, accounting, registration, test grading, tax return verification, hospital diagnosis, actuarial calculations, legal research, typesetting, criminal identification, quality control, commercial carrier scheduling, and engineering designs.

Time Sharing. Despite the larger number of machines available, the work that scientists, businessmen, and government specialists seek to have done on them is far greater than the capacity of existing equipment. As a consequence, and because of the extraordinarily high speed of modern computers, the time-sharing technique has been developed to permit maximum use of installed computers. Time sharing makes the capabilities of a centrally located machine available simultaneously to many remotely located users.

In such a system the user employs a teletype or similar device that is coupled to the computer by a telephone cable. He then communicates with the computer, which carries out the program that has been transmitted to it. The user may identify his program by sending a code number. After the work has been done, the user is billed periodically by the central service for the computer time used.

Thus time sharing permits many persons to use a computer simultaneously. The individual demands of each user are juggled back and forth, and, with the high speed of the machine, the work appears as though it were being done all at once. The outcome is the development of a "public utility" such as the telephone or electric companies which supply services to subscribers. It was evident in 1967 that such a utility would become an important source of computer service for many users.

As a consequence, some computer systems involving the communications industry were being developed. In these systems computer manufacturers would have to tie in their own communications terminals with the facilities of a common carrier, such as the telephone industry.

This kind of integration was illustrated in the RCA 3301 computer system, as well as in the Spectra 70 series of computer systems developed by RCA. In the latter, for example, the elements of 30 communication services and terminals were included as integral parts of the computer system. Remote visual display devices and random-access file components also were included in this system.

The advantages of these newer systems to airlines, banks, insurance companies, manufacturers, and the military are enormous. The military, for example, uses a system known as AUTODIN (Automatic Digital Information Network), which carries out military communications among units of the network by routing messages on a preestablished priority basis. The present network includes over 350 locations and is expected to expand to over 2,000 American locations and 10 overseas centers.

Automation and Industry. A recent study revealed three major areas in U. S. industry in which automation is employed: (1) the manufacturing of consumer products, such as food and clothing, which is increasingly employing process-flow methods; (2) the fabrication and assembly of heavy industrial-equipment; and (3) the continuous processing of such goods as chemicals. Not only have companies applied computers to manufacturing, but there is a continued use of these machines in marketing, distribution, and research.

While the average spent on computer systems by the firms included in the survey was on the average one-half of 1% of sales, the actual dollar expenditure ranged up to $50 million a year. The largest part of outlays for these systems was on salaries, supplies, and the like (44%), while equipment, mainly for rentals, absorbed 37% of computer costs. The balance was spent on "software" or programming. It was expected that by 1970, production and distribution of manufactured items would account for 52% of total computer costs. These areas are currently responsible for about 39% of such costs.

European Developments. While computer growth was proceeding in the United States, expansion of computer use in other countries was facing difficulties. For example, General Electric, which in 1964 bought a half interest in the French computer firm Compagnie des Machines Bull, had to invest another $30 million to strengthen Bull's financial condition. Despite a substantial growth in the French market, Bull's losses in 1966 exceeded $20 million.

Part of the situation stemmed from the vigorous competition offered by International Business Machines (IBM), which, with perhaps 75% of the world's computer installations, was far ahead of its rivals, both U. S. and foreign. In France, Bull had an estimated 38% of the market, while IBM was credited with 56%. For Europe generally, the gap was even wider, with IBM accounting for 64% of computer installations and Bull holding 13%.

Rapid changes in computer technology have imposed rising costs on European computer manufacturers. The fact that these costs cannot for the present be recaptured from the market has imposed further difficulties.

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FORD offered the Torino as a 1968 intermediate.

AUTOMOBILES

Passenger car production in the United States dropped to a 4-year low in the 1967 model year. U. S. factories assembled 7,664,600 cars bearing 1967 labels—nearly 1,000,000 units below the 8,611,928 cars built in the 1966 model run.

Not since the 1963 model year, when 7,346,855 cars were built has volume been so low. U. S. producers had reached an all-time record high of 8,849,032 cars built in the 1965 model year, but there followed a mild decline of 2.6% in 1966 models and a jarring decline of 12.3% in 1967 models.

1967 MODEL YEAR

Auto manufacturing executives and industry observers cited many reasons for the disappointing output of 1967 models. They blamed the downturn on overbuilding and overselling in the 1966 model year, with a consequent saturation of demand; the Vietnam War's drain of young male buyers through the military draft; lack of major styling changes on the popular standard-size and intermediate-body styles; approach of the United Automobile Workers' strike deadlines at the end of the 1967 model year (culminating in a national strike against Ford); severe winter weather early in 1967; and continued sales resistance to certain makes because of publicity about the federal government's new safety-component and antifume automotive standards.

When the slide in 1967 model sales became an irreversible fact, manufacturers lowered production schedules sharply in an effort to help dealers avoid excessive stockpiles of leftover cars. News of a decline in auto sales tends to accentuate consumer reluctance to buy until the next model is released. The production cutback, plus the 49-day Ford strike in September and October 1967, left many dealers with depleted stockpiles as the 1968 model year began.

All four major U. S. builders of cars suffered reductions in volume of 1967 models. General Motors dropped from 4,389,636 in 1966 to 4,026,535 in 1967; Ford Motor Co. from 2,472,554 to 2,141,997; Chrysler Corp. from 1,448,213 to 1,253,630, and American Motors Corp. from 295,897 to 235,522.

The brightest spot in the 1967 model year was in the so-called sportster market, first developed among domestic entries by introduction of Ford's Mustang in the spring of 1964. Ford produced a record high of 607,815 Mustangs in the 1966 model run, but competitors introduced three sportsters in the 1967 model year—Chevrolet's Camaro, Mercury's Cougar, and Pontiac's Firebird. Mustang production of 1967 models declined to 472,121, but the sportster field as a whole more than made up for the Mustang setback.

Besides the sportsters, there were eight other specialty car nameplates in the 1967 model run. A total of 1,294,364 specialty cars were built in the model year. By makes, totals were as follows: Mustang, 472,121; Camaro, 166,041; Cougar, 111,789; Firebird, 92,495; Ford Thunderbird, 77,956; Plymouth Barracuda, 62,534; Buick Riviera, 42,799; Chevrolet Corvair, 27,260; Chevrolet Corvette, 22,938; Oldsmobile Toronado, 21,790; Dodge Charger, 15,788; and Cadillac Eldorado, 14,714.

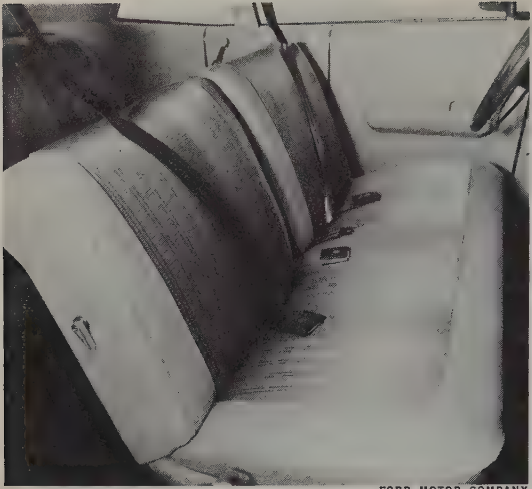
Hardest hit among the specialty cars was the Corvair, which had been named in a number of product liability damage suits by accident victims. From an output of 237,056 cars in the 1965 model year, Corvair dropped to 103,743 in 1966 and slightly over 27,000 in 1967.

THE 1968 MODELS

The number of models offered by U. S. car manufacturers for the 1968 year was trimmed to 357 from the postwar peak of 370 available at the end of the 1967 run.

By corporation, 1968 model totals were: GM, 152; Chrysler, 99; Ford Motor, 83; and American Motors Corp., 23. For the new season, GM cut 17 models from the 1967 total and AMC 3, while Ford went up 4 and Chrysler 3. To reduce the overlapping models in the lower price ranges, Chevrolet eliminated five Chevy II's and two Corvairs. Buick dropped four; Pontiac, three; Oldsmobile, two; and Cadillac, one. The AMC reduction was confined to Rambler Americans. Gains in the number of models by standard Ford, Cougar, and the intermediates lifted Ford Motor's total. At Chrysler Corp., there were increases by Plymouth in the standard and intermediate ranges, and by Charger and Dart, but

AMERICAN MOTORS introduced its Javelin.



FORD MOTOR COMPANY

SHOULDER HARNESSES limit upper-body motion in a crash. The straps became mandatory on new models Jan. 1, 1968.

Dodge Polara-Monaco dipped by three models. American Motors entered the specialty car category in the 1968 model year by introducing the Javelin. It also planned to unveil a two-seater, the AMX.

Styling. Intermediate models reflected the most pronounced design changes for 1968. Front vent windows were disappearing in line with a trend pioneered on Riviera, Eldorado, and Toronado. Vent windows were absent on the Camaro, Firebird, and Javelin. Tapered notchback lines, replacing old fastback looks, were introduced on GM's intermediate Chevelle, Tempest, Special, and F-85. Mercury lengthened its former Comet intermediate and renamed it Montego. New bodies also were introduced by Ford's Fairlane (Torino), Plymouth's Belvedere and Satellite, and Dodge's Coronet—all in the intermediate sector. Recessed windshield wipers, introduced on the 1967 Pontiac, were made standard equipment throughout the 1968 GM lines.

Labor. At the expiration of a 3-year contract on Sept. 6, 1967, the United Automobile Workers struck the Ford Motor Co. It was 49 days later, on October 25, that the union voted to accept a new 3-year contract, which would raise wages and fringe benefits about 7% overall. The union and its next target, Chrysler Corp.—which had kept producing—reached an agreement on November 8. The union canceled a strike threatened for midnight that night, but many local Chrysler plants were shut down by strikes that lasted for days. For the first time, the Chrysler agreement provided for raising the base pay of its Canadian workers to equal that of its U. S. workers within 30 months. General Motors matched the Ford and Chrysler national pattern in an agreement reached on December 15.

Prices. For the second year in a row, prices for new cars rose on 1968 models. Increases averaged 3.64% on the basis of advertised-delivered prices

WORLD MOTOR VEHICLE DATA

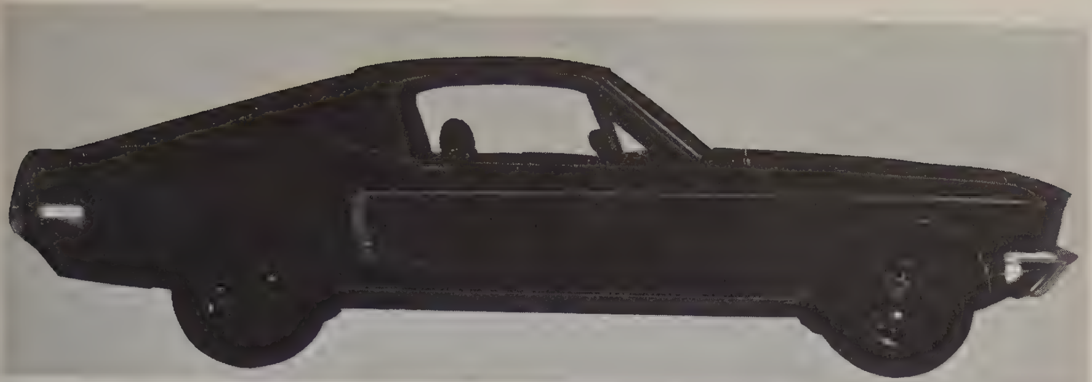
	1966 Car Production	1966 Truck Production	Vehicle Registrations Dec. 31, 1966
United States	8,604,726	1,758,692	90,370,182
Canada	696,100	200,019	6,510,985
Mexico	84,802	31,901	1,190,504
North America total	9,385,628	1,990,612	99,108,990[1]
West Germany	2,830,050	226,650	10,739,383
Britain	1,603,680	438,675	10,547,400
France	1,678,350	204,180	10,687,820
Italy	1,260,481	81,512	6,141,700
Spain	264,482	90,577	1,194,520
Sweden	173,500	26,411	1,937,732
Belgium	168,450	30,550	1,633,500
Netherlands	20,758	7,245	1,546,000
Austria	1,400	3,400	892,113
Switzerland	...	...	1,007,142
USSR	230,000	445,000	4,391,000
Czechoslovakia	92,717	17,960	572,000
East Germany	105,210	15,600	820,517
Poland	29,200	32,400	437,900
Yugoslavia	35,210	87,150	273,804
Rumania	15,777	7,665	90,500
Hungary	3,860	4,370	99,395
Europe total	8,513,125	1,719,345	56,245,655[1]
Morocco	...	...	228,327
South Africa	N.A.	N.A.	1,408,000
Africa total			3,277,009[1]
Japan	884,585	1,402,000	5,597,584
Australia	289,000	72,000	3,766,597
New Zealand	N.A.	N.A.	881,361
India	...	...	715,500
Communist China	N.A.	N.A.	236,600
Asia and Pacific total	1,173,585	1,474,000	13,718,920[1]
Argentina	134,500	45,000	1,428,908
Brazil	127,500	97,100	1,979,852
South America total	262,000	142,100	4,950,492[1]
World total	19,334,338	5,326,057	177,301,036

N.A. = Not available. [1] Includes additional (nonproducing) countries. Source: *Automotive News.*

U. S. PASSENGER CAR PRODUCTION

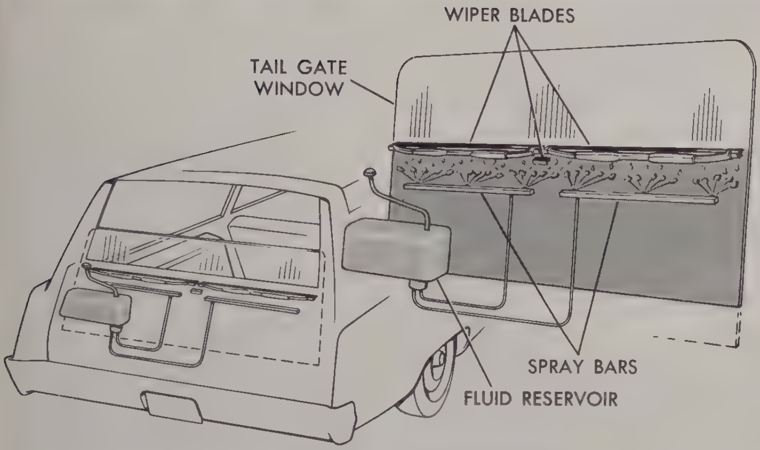
Company and make	1966 (Jan.-Sept.)	1967 (Jan.-Sept.
AMERICAN MOTORS CORP.		
American	64,019	45,650
Javelin	...	8,496
Rebel	81,810	60,799
Ambassador	41,702	35,908
Total American Motors Corp.	189,782[1]	151,101[1]
CHRYSLER CORP.		
Valiant	106,745	76,148
Barracuda	17,130	48,367
Belvedere	127,887	117,168
Fury	206,559	193,294
Total Plymouth	458,321	434,977
Dart	93,648	119,022
Coronet	179,233	136,447
Charger	32,727	14,316
Polara	88,244	51,595
Total Dodge	393,852	321,380
Chrysler	173,789	155,362
Imperial	9,957	8,788
Total Chrysler Corp.	1,035,919	920,507
FORD MOTOR CO.		
Ford	682,074	554,884
Fairlane	225,510	137,012
Falcon	102,960	30,448
Mustang	439,715	313,168
Thunderbird	47,825	45,850
Total Ford	1,498,084	1,081,362
Mercury	111,081	71,348
Montego-Comet	106,623	40,966
Cougar	5,483	106,306
Total Mercury	223,187	218,620
Lincoln	35,910	24,883
Total Ford Motor Co.	1,757,181	1,324,865
GENERAL MOTORS CORP.		
Chevrolet	1,051,975	802,167
Corvette	19,939	16,758
Chevelle	321,973	269,949
Camaro	15,755	150,286
Chevy II	118,298	86,898
Corvair	61,665	13,665
Total Chevrolet	1,589,605	1,339,726
Pontiac	339,869	311,658
Tempest	288,627	203,437
Firebird	...	92,495
Total Pontiac	628,496	607,590
Oldsmobile	219,322	185,139
Toronado	29,528	11,888
F-85	178,055	192,043
Total Oldsmobile	426,905	389,070
Buick	214,904	240,701
Riviera	35,263	30,300
Special	159,258	136,017
Total Buick	409,425	407,018
Cadillac	143,622	136,063
Eldorado	669	14,045
Total Cadillac	144,291	150,108
Total General Motors Corp.	3,198,722	2,893,512
CHECKER MOTORS CORP.	4,332	4,324
Total U. S. production	6,185,936	5,294,309

[1] Total does not add because of uncompleted 1967 models at start of Ford strike. Source: Automobile Manufacturers Association.



FORD MOTOR COMPANY

SAFETY FEATURES in the 1968 cars include side marker lamps. They light the side of a car at night.

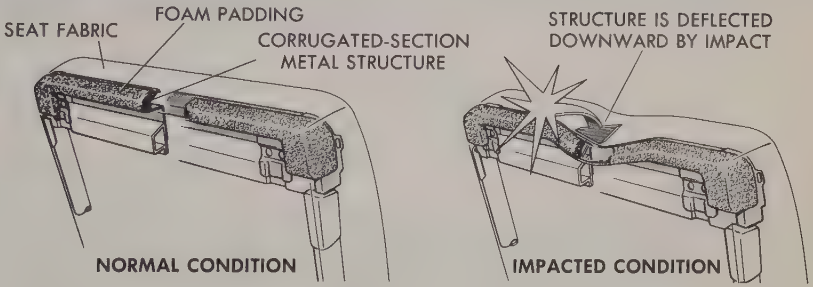


WASHER-WIPER SYSTEM cleans tailgate window on a new station wagon. The device is set in the tailgate.

DODGE DIVISION, CHRYSLER CORPORATION

SECONDARY IMPACT is cut by this special energy-absorbing seat.

DODGE DIVISION, CHRYSLER CORPORATION


SEAT FABRIC
FOAM PADDING
CORRUGATED-SECTION METAL STRUCTURE
STRUCTURE IS DEFLECTED DOWNWARD BY IMPACT
NORMAL CONDITION
IMPACTED CONDITION

(those posted on windows of new cars). This amounted to an average boost of $116.42 per car. Also for the second consecutive year, Chrysler rolled back its prices for new cars after GM posted lower increases. The Chrysler cuts in 1967 ranged from $5 to $72. Big Three manufacturers attributed the new round of price increases to higher labor and materials costs, as well as the cost of mandatory safety equipment and the new antifume devices.

AUTOMOTIVE SAFETY

The biggest innovations in the 1968 models were in the area of safety equipment and exhaust-emission-reduction systems, as required by the Federal Highway Safety Act of 1967 and the Federal Clean Air Act. Every 1968 car was required to carry as standard equipment a mechanism to reduce exhaust emissions to minimal levels. The Department of Health, Education, and Welfare established a laboratory at Ypsilanti, Mich., near Detroit, to inspect all smog-control systems offered by both domestic and foreign manufacturers.

Additional safety equipment required on new models after Jan. 1, 1968, included a seat belt for every passenger seat, padded instrument panels, ruptureproof and fireproof gasoline tanks, collapsible steering columns, dual braking systems, windshield washers, and side cornering lights. Hood ornaments and spinner hubcaps were forbidden. In response to industry criticism that insufficient time existed for compliance with them, proposed federal standards for front-seat headrests and minimum bumper heights were put off. A requirement for front-seat shoulder harnesses took effect on Jan. 1, 1968.

The National Highway Safety Bureau reported that manufacturers conducted 91 recall campaigns to correct possible defects in 1,882,050 vehicles in the 12 months ended Sept. 9, 1967. In addition, GM recalled 1,143,000 of its 1965 Chevrolets in October 1967 to replace a steering part, and Ford recalled 745,000 of its 1966 and 1967 cars—including all 1967 Mustangs—in October 1967 for inspection of steering wheels.

MAYNARD M. GORDON
Editor, "Motor News Analysis"

AUTOMOTIVE SAFETY. See AUTOMOBILES; NATIONAL HIGHWAY SAFETY BUREAU.

AVIATION

KEYSTONE

CONCORDE, the new Anglo-French supersonic transport plane, stands silhouetted against the sky during its first public appearance, December 11, at Toulouse, France.

AVIATION

The principal events and trends in aviation in 1967—the introduction of new passenger jet transports, the USSR's disclosure of major advances in aircraft design, the waging of air war in the Middle East and in Vietnam, and other developments—are reviewed in this article. They are covered under two headings: (1) Civil Aviation, and (2) Military Aviation.

CIVIL AVIATION

Civil aviation experienced a worldwide boom during 1967. Scheduled airlines in the United States employed more than 275,000 men and women, an increase of 13% over 1966, reflecting the rapid growth of civil aviation. The average annual salary for airline employees in 1967 was $8,000, close to the top for all U.S. industry.

New U. S. Planes. Civil air progress in the United States during 1967 included the issuing of certificates for new transports, as well as studies of a proposed new family of transports that are labeled "airbuses" but that would have far better accommodations than the name implies.

Federal Aviation Administration certification of the Boeing 737 short-haul transport came late in the year. Early production versions of the short-haul transport were to be delivered by Boeing to Lufthansa German Airlines and to United Air Lines. Powered by two Pratt & Whitney JT8D-1/7 jet engines, producing 14,000-pound sea-level static thrust each, the 737-100 series of the new design can carry 101 passengers and the 737-200 series can seat 117.

Additional orders during the year for the Boeing 747 jumbo jet transports included two for Swissair planned for delivery in 1971. Capable of seating 490 passengers in some configurations, the giant aircraft are the first to be purchased by Swissair from Boeing.

The maiden flight of the McDonnell Douglas DC-8-63 stretched jet transport also took place in 1967. An enlarged version of the basic DC-8 series, the -63 is the heaviest of three stretched DC-8 versions and has a maximum gross takeoff weight of 350,000 pounds.

The airbus designs proposed by major aerospace companies would have capacities of from 250 to 300 passengers. Studies suggested during the year by McDonnell Douglas included two aircraft—a DC-10-3 powered by three engines with a transcontinental range of 2,600 nautical miles, and a DC-10-4 fitted with four of the same engines to give it an intercontinental range of 5,200 nautical miles. Both designs would be powered by high-bypass-ratio turbofan engines rated at 32,000-pound sea-level static thrust. General Electric and Rolls Royce have offered engines in the 30,000- to 34,000-pound thrust category for the DC-10 designs.

Airbus designs offered by the Lockheed-California Company were keyed to utilizing engine and aircraft design technology available in this decade to meet airline operator needs beginning in the early

1970's. One Lockheed design, designated CL-1011-28, is a twin-engine transport expected to carry 250 passengers for 1,400 nautical miles. With a wingspan of 155 feet, the craft would have a design takeoff gross weight of 300,000 pounds. Power plants would be either the Pratt & Whitney JT9D, developing 48,100 pounds sea-level static thrust, or the Rolls Royce RB.207-05, designed for 50,300 pounds sea-level static thrust.

New Soviet Planes. New commercial jet transports built by the USSR appeared in June at the Paris Air Show. The Soviet Yak-40 three-engine, short-haul transport represented a change in Soviet transport design, which by tradition has usually relied on military configurations or Western layouts. The Yak-40 is scheduled to replace the still frequently operated Li-2 Soviet-built version of the Douglas DC-3.

Maximum range of the Yak-40 is 1,650 km, or 1,025 miles. Power plants are three Ivchenko AI-25 turbofan jets rated at 3,300 pounds thrust each. Maximum takeoff weight is 13.130 kg, or 28,930 pounds, not much different from the DC-3's 25,000 pounds gross weight. The cabin configuration is a 24-seat or a 31-seat arrangement.

International Traffic. Airlines flying lucrative North Atlantic routes were expected to set records in 1967 by carrying 5 million passengers in scheduled operations. Changes in airline schedules during the summer to meet big gains in passenger traffic to Europe included:

(1) Air Canada increased service between Canada and Britain from 28 to 30 round trips weekly and between Canada and the Continent from 9 to 15. Moscow and Copenhagen became new gateways for Air Canada in 1967.

(2) Air France scheduled 67 weekly round trips during peak summer months, a 34% increase over the 1966 summer season. The carrier opened nonstop service between Chicago and Paris.

(3) Japan Air Lines provided two trips weekly in its first summer on the North Atlantic routes, with each flight stopping in New York and London before continuing to cities on the Continent.

Increased air traffic in 1967 produced inroads into the Western world and the Far East by the USSR. The U.S. Civil Aeronautics Board recommended issuance of a foreign carrier permit to Aeroflot, the Soviet government airline, in a step toward removing one of the last legal barriers to direct New York-Moscow commercial air operations. Earlier, the Port of New York Authority granted Aeroflot permission to use Kennedy International Airport, and a Soviet technical delegation in a new Il-62 jet transport landed there and also in Washington in a proving flight in November.

Aeroflot and Swissair began regular service between Moscow and Zurich in July in accordance with a new air transport agreement signed by the Soviet Union and Switzerland. Flight time on the route by Aeroflot is 4 hours 15 minutes, with an intermediate stop in Vienna.

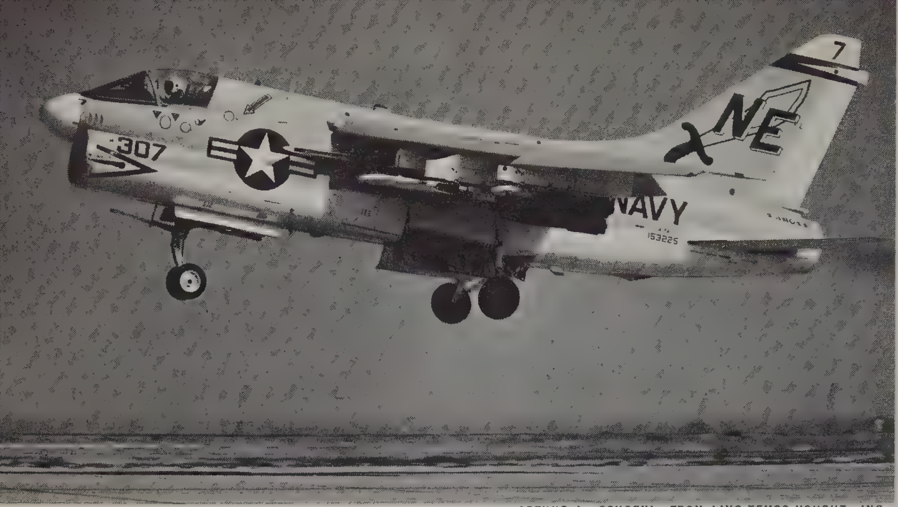
Scandinavian Airlines System inaugurated flights between Copenhagen and Southeast Asia via a great circle route over the USSR. This trans-Asian express route is expected to extend eventually to U.S. Midwestern cities, as well as to most of Europe, because it makes possible shorter flight times than the trans-Pacific routes.

Airports and Traffic Control. With the upsurge in air traffic in 1967, airport congestion was intensified. The congestion calls for new studies of advanced concepts in airport development and construction. One concept studied for the Los Angeles area included an airport built offshore on caissons. The overwater facility would be 5 miles long and 2 miles wide, providing space for four 12,000-foot-long runways.

Massive increases in funds for major improvements to expand existing air traffic control aids was called for by aerospace officials during the year. An increase of 260% over the $35 million requested by the Federal Aviation Agency (FAA) was recom-

UPI

DIRECT AIR TRAVEL between Russia and the United States came one step closer to reality in November when a huge Soviet Ilyushin jet transport was subjected to noise-level tests at Dulles International Airport, which serves Washington, D. C.



NEW BOMBER for the U.S. Navy, the A-7A Corsair, is tested in California. The carrier-based A-7's began flying combat missions over North Vietnam in December.

ARTHUR L. SCHOENI, FROM LING-TEMCO-VOUGHT, INC.

mended by Stuart G. Tipton, president of the Air Transportation Association, while testifying before the Senate Appropriations Committee transportation subcommittee. For improved safety, Tipton called for control towers at all airports providing airline service, terminal area radar for all airports having regular airline operations, and approach lights to complement instrument landing systems used by the airlines.

Supersonic Design. Worldwide competition for the supersonic transport market forced changes in the designs of all major contenders. Changes in the Anglo-French Concorde included providing more passenger room and increasing the baggage capacity by one third. Concorde seating in an all-tourist configuration was reduced from 136 to 132. Revised structural changes of the Concorde increased its maximum takeoff weight from 350,000 to 367,000 pounds. The expected maximum cruise speed was reduced from Mach 2.2 to slightly in excess of Mach 2.0 because of temperature limitation associated with its structure.

DEMOLISHED JETS litter an Egyptian airfield after Israel's crushing air victory at the start of the June war.

PICTORIAL PARADE

The Anglo-French design team rolled out one of two prototype Concorde aircraft at Toulouse, France, on December 11. The first flight of the graceful design was planned for 1968.

Designers for both the Concorde and the Boeing Company, which is developing the United States' supersonic transport, planned to incorporate canard surfaces (small winglike stabilizing surfaces forward of the wing) for improved longitudinal control during low-speed flight.

At the Paris Air Show, the USSR showed a new model of its Tupolev Tu-144 supersonic transport design. Western observers noted that the model had been revised to pair engines in two nacelles (engine housings) tapered to overcome excess aerodynamic drag. The previous display had shown four single engines.

MILITARY AVIATION

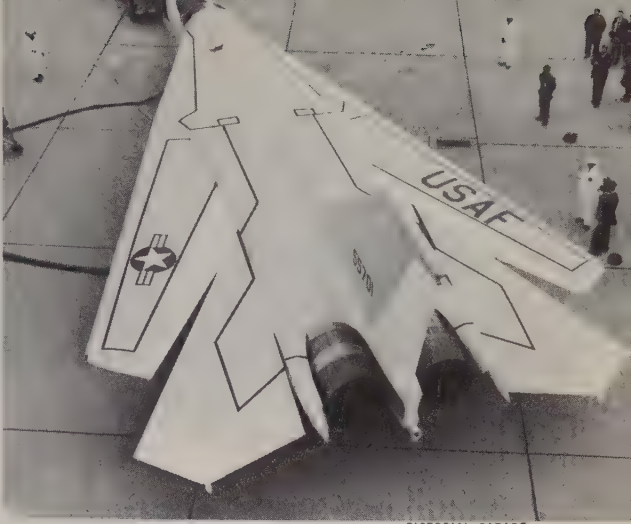
Military aviation highlights in 1967 included Israel's dramatic demonstration of the effective use of tactical airpower during the Israeli-Arab war, increased escalation of air warfare over North Vietnam by the United States, and the revelation of significant advances in aircraft design by the USSR. The Soviet advances were displayed during the first major air show by that country in six years.

Israeli Airpower. The Israeli air force applied tactical airpower in lightning-fast strikes when war

ARAB BLOC AIRCRAFT LOSSES, 1967
(Destruction claimed by Israeli air force
in first 60 hours of Mid-East war of June 1967)

Type of aircraft	Egypt	Syria	Jordan	Iraq	Total
Tu-16	30			1	31
Il-28	29	2			31
Il-14	24		5	5	34
An-12	8				8
Mi-6	10				10
Mi-4	1	3	3		7
MiG-21	100	32		13	145
MiG-19	29				29
MiG-15, 17	87	23			110
Su-7	14				14
Hunter			21	6	28[1]
Unidentified	4				4
Total	336	60	29	25	451

[1] Includes one Lebanese Hunter.



PICTORIAL PARADE

CONTROVERSIAL F-111 jet fighter, shown with its wings in swept-back position, became operational during 1967.

erupted in the Middle East on June 5, 1967. After the order to attack was given at 7:45 A. M. on the first day of the war, Israeli pilots began striking at Arab air bases. In all, 25 Arab bases were hit in four days of conflict. Israeli pilots claimed the destruction of 374 enemy aircraft in the first day of war and listed an additional 34 planes as probably destroyed. Israel admitted losing 19 aircraft the first day. For the first 60 hours of the war, the Israeli forces claimed the destruction of 451 Arab aircraft.

Aircraft used by the Israeli pilots included the following French aircraft designs: Dassault Mirage 3CJ Mach 2 fighters; Dassault Super Mystere B.2 transonic (about 600-900 mph) fighter-bombers; Dassault Mystere 4A transonic fighter-bombers; Sud Vautour light twin-jet bombers; Dassault Ouragan subsonic jet fighters; and Potez-Fouga Magister twin-jet trainer/strike aircraft.

Military observers viewed the brief war as an outstanding object lesson in the value of intelligently applied airpower. The Israeli air force destroyed more than $500 million worth of Soviet-supplied prime equipment during the first hours of the war. Their initial action opened the way for later destruction or capture of an additional $1.5 billion in weapons supplied by the Soviets over the past several years, including the first fully equipped SA-2 (surface-to-air) missile site to fall into Western hands.

Air Warfare in Vietnam. Increasing losses of tactical aircraft during the late summer of 1967 prompted U. S. military air units to strike the major MiG jet fighter base of Phuc Yen, 18 miles northwest of Hanoi, on October 24, for the first time in the Vietnam War. The base had been off limits to U. S. air strikes despite the unanimous recommendations since 1966 of the Joint Chiefs of Staff to President Johnson that the major air base be put out of action. During three days of air strikes the base runway was heavily cratered. However, it was soon repaired by North Vietnamese and Chinese laborers filling in the holes with dirt and rock and tamping them down with human foot-power.

The continuing Vietnam War required a new infusion of funds for increased numbers of tactical aircraft to be procured during 1967 and 1968 for U.S. forces. During 1967, U.S. tactical air inventories included 4,800 fighter, attack, and reconnaissance aircraft. The backbone of this force for both the Air Force and Navy was the McDonnell Douglas F-4. The Ling-Temco-Vought A-7, which began to come into active service by year's end, was expected to assume the prime attack role for both services.

Other moves taken by the Air Force to provide adequate airpower in Vietnam in 1967 included the assigning of additional aircraft, no longer in production, to special air warfare missions. These vintage aircraft included the Douglas C-47 and the Fairchild C-123. The C-123's, some augmented with jet engines for performance near that of short-take-off-and-landing craft, were used for defoliation missions in Vietnam.

U.S. aircraft that saw combat for the first time in 1967 included the O-2 and the A-37. A modified off-the-shelf version of the civilian Skymaster light aircraft, the Cessna O-2 was used for the first time in combat while performing psychological warfare missions and as a forward air controller aircraft. The Cessna A-37, originally designed as a twin-jet basic trainer, was modified to carry external ordnance loads and act as a strike aircraft on close air-support missions in Southeast Asia.

Soviet Air Show. New aircraft introduced by the USSR at a large air show in July 1967 indicated that Soviet aircraft designers are advancing across a broad spectrum of aeronautical technology. Held at the new Domodedovo civil airport 30 miles south of Moscow, the display—the first Soviet air show in six years—included 12 new and advanced aircraft designs that demonstrated the USSR's growing capability in tactical air warfare. Six of the 12 new designs were developed by designer Artem Mikoyan. Three more were attributed to the design bureau led by Pavel Sukhoi. The new aircraft included:

(1) A Mikoyan-developed variable-geometry fighter with an external appearance closely resembling the General Dynamics F-111. This single-place, twin-engine aircraft is believed to have an attack speed of Mach 2.8 with a capability of reaching Mach 3 for a short period of time.

(2) A Sukhoi-designed variable-geometry fighter design of the Su-7 Fitter attack aircraft.

(3) A Mikoyan vectored-thrust experimental attack aircraft that took off and landed vertically at the air show. Its general design features are similar to early MiG-15 and MiG-17 aircraft with a round, fat fuselage, bifurcated nose inlets, and a horizontal stabilizer mounted high on the vertical fin.

(4) A Mikoyan Mach 2.5-plus STOL (short takeoff and landing) interceptor that has a retractable slotted door just behind the cockpit to serve as an inlet for the one or more direct-lift power plants mounted vertically in the fuselage.

(5) A Sukhoi STOL version of a new Mach 2.8 twin-engine interceptor. It has two inlet doors for direct-lift engines behind the cockpit.

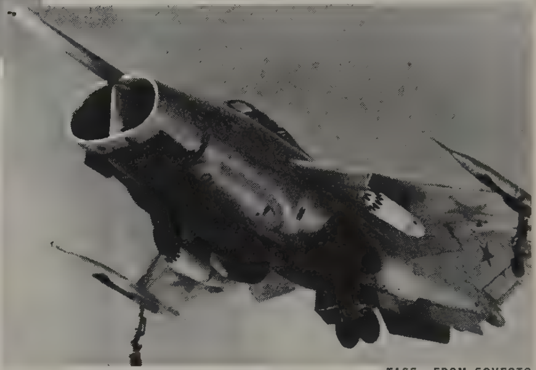
(6) A Mikoyan-designed STOL version of the standard Mach 2 MiG-21 Fishbed F fighter, with one or more direct-lift engines in the fuselage.

(7) A Mikoyan twin-tail, delta-wing aircraft with a Mach 2.8 attack speed. It is equipped with afterburners. The Soviets revealed in late 1967 that this aircraft, designated the E-266, had set three speed or altitude records. Records claimed by Soviet officials include: an average speed of 1,808 mph over a 1,000-km closed course with a 4,410-pound load; a flight with the same load at an altitude of

TASS, FROM SOVFOTO

(*Left*) Delta-wing supersonic jet fighters fly in graceful formation over Domodedovo Airport.

(*Below*) New vertical take-off jet fighter, designed by Artem Mikoyan, shows capabilities.



TASS, FROM SOVFOTO

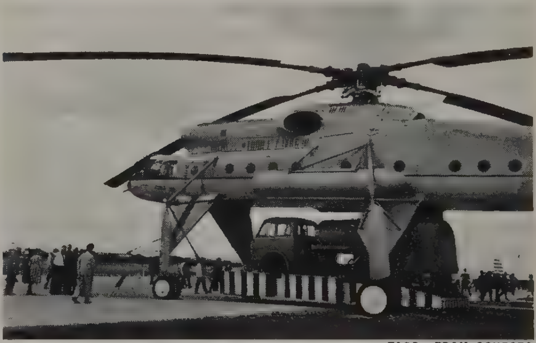
SOVIET AIRPOWER ON DISPLAY

Domodedovo Airport, 30 miles south of Moscow, was the site of the July 1967 air show held in honor of the Soviet Union's Aviation Day holiday. In addition to many new military aircraft, the show featured jet transports of a type to be used in the proposed Moscow-New York air route.

Strategic bomber, powered by four jet engines, dwarfs other military aircraft lined up with it at the July air show.

TASS, FROM SOVFOTO

(*Below*) Gas-turbine MI-10 helicopter is large and powerful enough to airlift heavy loads, such as a small tank truck.



TASS, FROM SOVFOTO

98,462 feet; and a flight over a 500-km closed course at 1,820 mph.

(8) A Yak-28P twin-engine, all-weather interceptor. It is a follow-on model to its predecessor, the Yak-28 Firebar, which was first shown at the Tushino air show in 1961. Larger and longer than the Yak-28, the two-man Yak-28P carries air-to-air missiles under each wing.

(9) A Mikoyan E-166 high-altitude, high-speed experimental aircraft that was shown publicly for the first time at the 1967 air show (although the Soviets claimed three world speed and altitude records for it in 1961). The records claimed were altitude in horizontal flight—74,380 feet; speed over a 15/25 km course—1,446 knots; and speed over a 100-km closed course—1,295 knots; Its TRD Mk. R.166 engine is rated at 22,000 pounds of thrust.

(10) A Sukhoi Mach 2.8 twin-engine interceptor with a rectangular box-type inlet on either side of the fuselage.

(11) A Tupelov follow-on to the Fiddler all-weather, twin-engine, long-range interceptor that can carry two air-to-air missiles under each wing.

(12) A Beriev Be-30 high-wing, twin-turboprop transport with a cruise speed of about 285 mph.

F-111. On May 10, General Dynamics Corporation received a $1,820,000,000 contract from the Defense Department to build the basic airframes and some electronic equipment for 493 F-111 aircraft. The variable-sweep-wing jet was designed as a two-service (Air Force and Navy) plane. However, advances in Soviet tactical aircraft—revealed in the Moscow air show—added fuel in 1967 to continued Navy opposition to procurement of the F-111B and triggered alternate design proposals to replace it. The F-111B could not meet the Navy's needs as a fighter against a threat posed by some advanced Soviet aircraft, according to a study developed at the Navy's request by the Grumman Aircraft Engineering Corp. Firms proposing alternate designs included Grumman, McDonnell Douglas, North American Rockwell, and Ling-Temco-Vought. A further blow to planned use of the F-111 design came in early 1968 as Britain canceled its planned purchase of 50 F-111K aircraft to save an estimated $960 million in 10 years.

BERNARD K. THOMAS, JR.
"Aviation Week & Space Technology"

AWARDS. See PRIZES AND AWARDS.

AYUB KHAN, Mohammed. See biographical sketch under PAKISTAN.

BACTERIOLOGY

New discoveries in the field of bacteriology (microbiology) continued at a rapid rate in 1967. A few of the more important developments are described in this article.

Antibiotics. Although new antibiotics were discovered in 1967, greater attention was given to the preparation of more effective derivatives of known drugs and also to the elucidation of the mechanism of antibiotic action. Even though intensive studies have been made in the past on the antibiotic penicillin, its mode of action still remains obscure. It appears, however, that the drug acts by interfering with a step in the synthesis of a particular component (murein) of the bacterial cell wall.

Viruses and Tumors. Because cancer cells are unable to regulate their cell division, and since this characteristic is inherited, it seems that a genetic change results when normal cells are transformed into cancer cells. However, there has been some question as to whether virus-induced tumors result from the addition of genetic material, from mutations (changes in the genetic material), or from the deletion of genetic material. Recent experiments provide strong evidence that the change is due to the addition of genetic material to the normal cell from the virus.

Microbial Insecticides. Many insect pests have been found to be susceptible to certain microorganisms that are not harmful to plants or beneficial insects. The pine caterpillar, for example, has been successfully controlled in some forests by spraying viruses from a helicopter at a rate of 100 billion viruses per hectare (one hectare equals about 2½ acres). Similar results have been obtained from experimental use of microorganisms for controlling insects on cotton, citrus trees, and cabbage crops. Experiments have also been successful in destroying houseflies and mosquitoes. Although the use of microbial insectides may eventually be of great value, more comprehensive studies are necessary before they can become of general use.

Interferon. Interferon is a substance that is produced by normal cells in response to invasion by a virus. Although interferon was discovered in 1957, it was not until 1967 that important discoveries were made concerning how it works and how cells are stimulated to produce it. Interferon works by first binding itself firmly to the surface of the host cell (virus) and then inhibiting the cell from synthesizing the enzyme polymerase, an enzyme necessary for the synthesis of nucleic acids. The antiviral action of interferon can be destroyed by another enzyme, trypsin, and by the hormone insulin, and scientists are trying to determine whether the action of interferon can be affected by other substances.

Microbial Genetics. Scientists have now isolated bacterial proteins that act as regulators to turn genes on and off according to the cell's needs or activities. One of these proteins controls the action of genes that are involved in the bacterial breakdown of lactose (a milk sugar). Another recently isolated protein controls the genetic instructions that prevent a virus from destroying a host cell.

Microorganisms as a Food Source. Recent investigations indicate that certain microorganisms eventually may serve as a useful source for increasing the world's supply of protein-rich foods. It has been found that some high-protein algae grow so rapidly that they may yield 10 times as much per acre as can be produced by conventional agriculture. One such alga, *Spirulina*, has a protein content of 60% to 70%, more than that of most other foodstuffs. It is also rich in vitamins. One of the aspects that needs further improvement is the digestibility of the dried algal product. (See also BIOCHEMISTRY.)

Oxygen-Free Laboratory. At the National Heart Institute in Bethesda, Maryland, a laboratory has been built to permit the large-scale isolation, cultivation, and biochemical study of anaerobic microorganisms, organisms that cannot grow in the presence of air. Some anaerobes are responsible for producing certain diseases, such as gas gangrene, tetanus, and botulism. Others are important because they produce large amounts of vitamin B_{12} and related substances.

J. R. PORTER
College of Medicine, University of Iowa

BADMINTON. See SPORTS.
BAHAMAS. See COMMONWEALTH OF NATIONS.
BALLET. See DANCE.

BALTIMORE

A new Democratic mayor, another record budget, and trouble in the public schools made headlines in Baltimore in 1967. Noticeably absent from the local news were racial disorders such as those that plagued many American cities during the summer.

Elections. Thomas D'Alesandro III, a Democrat, was elected mayor in the municipal elections. He succeeded Republican Theodore R. McKeldin, who retired from public office after two separate terms as mayor, having served two terms in the interim as governor of Maryland. D'Alesandro, who had been city council president for the last four years, takes up an office held by his father for three terms (1947–59). Democrats, as usual, won all the city council seats.

Public Finance. Baltimore adopted a record $537 million budget for the 1968 fiscal year, beginning in July. The city lowered its property tax slightly and eliminated the 1% earnings tax imposed the previous year as an emergency measure. This was made possible by a revised, graduated state income tax, which permits each county and Baltimore city (which ranks as a county) to add a local surtax of up to 50% of the state tax. The city exercised this option in full; most counties did not.

Education. The National Education Association, at the instigation of the Baltimore Public School Teachers Association, imposed partial national "sanctions" on the city's school system, warning prospective teachers and business and industry of deteriorating inner-city schools and inadequate financial support. In spite of its more aggressive attitude, the PSTA was defeated by the militant Baltimore Teachers Union in a representation election. The school budget adopted for the 1968 fiscal year represented the largest percentage increase (25.4%) in the city's history.

Race Relations. Baltimore's city population (1967 est.: city, 910,000; metropolitan area, 1,990,000) was 42% nonwhite in 1967. Baltimore had none of the serious disorders and racial riots experienced by many other cities. A crash summer employment program aimed primarily at Negroes was carried out. The city council approved a unique self-help housing program, devised by poverty-area residents, that provides for neighborhood sanitation inspectors, stepped-up refuse removal, "tool pools" to lend out at nominal rentals tools for home repairs, and landlord-tenant councils. The liquor board adopted a policy of revoking the license of any bar found guilty of discrimination.

Transportation. Long-delayed work on the Baltimore expressway program began again, on the southern leg of the Jones Falls (north-south) Expressway, and land and building condemnation was begun for the East-West Expressway.

Construction. Charles Center development neared completion with the opening of the huge 17-story Federal Building with about 500,000 square feet of office space, a new hotel, and the $4.2 million Morris Mechanic legitimate theater. Downtown high-rise apartments, dominated by twin towers in Charles Center, continued to spring up. Development of the inner harbor, which juts into the heart of the city, was begun, with initial emphasis on a new Port Authority building and a large building to house the Maryland Academy of Sciences.

DUDLEY P. DIGGES
Baltimore "Evening Sun"

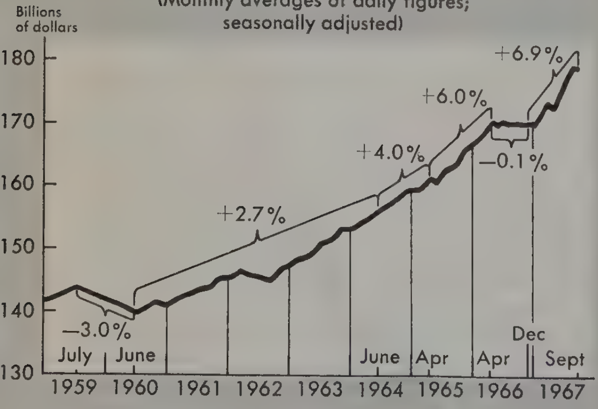
BANKING

The sustained U. S. economic expansion that began in 1960 entered its seventh year in February 1967 and continued through the year. The nation's central bank, the Federal Reserve System, pursued an expansive monetary policy in 1967. This was in contrast to 1966, when the System had actively engaged in anti-inflationary restraint until shifting its policy as inflationary pressures abated during the late fall.

In the last quarter of 1967 a renewal of inflationary conditions appeared in prospect. Although the Federal Reserve discount rate was raised from 4% to 4½% on November 20, Reserve System spokesmen voiced their intention of avoiding "excessive" monetary restraint, and the System maintained its policy of moderate ease. Apparently the System expected that the developing inflationary potential would be contained through timely fiscal policy actions—that is, an income tax increase effective in 1968, coupled with reduction in federal expenditures.

Monetary Policy in 1967. The expansive monetary policy was evidenced in March 1967 by a two-step reduction in reserve requirements on passbook savings accounts and on the first $5 million of time deposits at member banks. These actions released almost $1 billion in commercial bank reserves, about two thirds of which accrued to the nation's smaller (that is, country member) banks. In April the Federal Reserve banks' discount rate was lowered from 4½% to 4%.

U.S. MONEY SUPPLY
(Monthly averages of daily figures; seasonally adjusted)



Percentages are annual rates of change between periods indicated.

Source: Federal Reserve Bank of St. Louis

These policy actions were preceded and followed by open-market operations (Federal Reserve purchases and sales of U. S. government securities as part of its monetary stabilization policy) that provided the country's banking system with ample reserves to generate, through lending and investing, a substantial increase in money supply (demand deposits). The increase in reserves also permitted commercial (member) banks to reduce their borrowings from the Federal Reserve banks. These borrowings had reached historically high levels in 1966, but in the spring of 1967 they declined to the lowest level since the fall of 1962. Member bank borrowings continued to decline in most of the rest of the year, moreover, and from March until October the system operated with an increasing margin of net free reserves. This was in contrast to the large net borrowed reserve position imposed on it by monetary restraint during all of the preceding year.

ASSETS AND LIABILITIES OF U. S. BANKS[1]
(In billions of dollars)

	Dec. 31, 1966	Nov. 29, 1967
Assets		
Loans and investments		
Loans	266.1	279.7
U.S. government obligations	60.9	67.1
Other securities	54.7	68.0
Total loans and investments	381.7	414.8
Cash assets	70.0	62.7
Other assets	12.7	23.0
Total assets	464.4	490.5
Liabilities and Capital		
Deposits		
Interbank	20.9	18.3
Demand		
U.S. government	5.0	5.0
Other	167.8	163.7
Time	214.0	240.6
Total deposits	407.7	427.6
Other Liabilities	19.8	24.1
Total capital accounts	36.9	38.8
Total liabilities and capital	464.4	490.5

[1] Includes 13,762 commercial banks and 504 mutual savings banks as of January 1967. (Source: Board of Governors of the Federal Reserve System.)

Money Supply and Bank Credit Expansion. Monetary expansion was rapid in 1967. Member bank reserves—a key monetary variable, including both deposits at Federal Reserve banks and cash in vault and providing a base for both bank credit and the money supply—increased at an 11% annual rate during the first nine months of the year. This compared with a 5% annual average rate of growth in the 1964–66 period, and a longer-run trend rate of 3% from 1957 to 1964. Member bank reserves are largely generated by increases in Federal Reserve bank credit flowing from expansive Federal Reserve open-market operations. This credit, adjusted for the changes in reserve requirements in March, increased at an annual rate of 16% over the first three quarters of 1967.

The nation's money supply—privately owned demand deposits and currency outside banks—remained virtually constant in 1966, mirroring central bank policies of monetary restraint then in effect. The Federal Reserve's move toward ease late in that year, however, was followed by a sharp upturn in money supply beginning early in 1967. The rate of increase in the money supply for the first nine months of 1967—about 7% on an annual basis—was the fastest rate of increase for any 9-month period in over 20 years. In contrast, the money supply grew 4% annually from 1964 to 1966, and its longer-run trend rate growth from 1957 to 1964 was 2%.

Usually, the country has experienced a substantial acceleration in private (consumption and investment) spending within a few months after a marked and sustained money-supply increase such as occurred in the first nine months of 1967. The expectation of such a step-up in private spending, plus the known difficulties of reducing public spending, underlies the many inflationary prognoses for 1968 that have been advanced.

Commercial Bank Loans and Investments. Creation of money by commercial banks through lending and investing rose sharply in 1967. For example, from December 1966 through August 1967, total commercial bank credit rose at a 14% annual rate. By comparison, there was essentially no increase in this credit from July through December 1966, and its average annual rate of increase was only 7% from 1957 to 1966.

Bank loans rose by 7% in the first four months of 1967. Starting in May, however, when business activity began to quicken, the earlier rate of increase almost doubled. Even so, bank reserves increased faster than customer loan demand. (As noted earlier, Federal Reserve Bank credit rose at an annual rate of 16%.) Consequently, much of the sharp 1967 rise in bank credit centered in bank net purchases of securities. Bank investment portfolios increased substantially, at a rate over three times as high as their 3% growth rate from 1957 to 1966.

Over three fourths of the increase in bank investments occurred in the investment category of "other [than U. S. government] securities," and consisted almost entirely of the income-tax-free issues of state and local governments and their instrumentalities. Banks reaching out for income preferred these securities because of their tax and yield advantages over U. S. government issues.

Interest Rates. The prime rate, the interest rate at which the nation's largest banks lend to their biggest and best short-term business borrowing customers, reached 6%—a historically high level—in August 1966. Two 0.25% reductions, in January and March 1967, reduced it to 5.5%, a level at which it remained until November 20. (Then, as noted earlier, the Federal Reserve discount rate was raised, and the prime rate moved back to 6%.) As a result, banks' borrowing customers were accommodated at somewhat lower rates than in 1966. More important, however, most were readily accommodated in 1967 because loanable funds were abundant. In contrast, the "tight money" conditions of 1966 had resulted in many borrowers—especially small businesses and persons wanting mortgages—being "frozen out" of the banks.

Open-market money rates declined sharply over the earlier part of the year, but then began a steep upward rise again. Yields in the various maturity ranges, however, changed significantly. Short-term yields (on 91-day Treasury bills, for example) are most directly affected by bank credit expansion; and in 1967 until almost year-end, these yields remained below 1966 peak levels. Long-term yields (such as those on corporate and government bonds), on the other hand, are heavily influenced by market expectations of future rates. Long-term yields in 1967 moved above their 1966 peaks as the market built 1968's inflationary outlook into the term structure of interest rates.

Clifton H. Kreps, Jr.
University of North Carolina

BAPTIST CHURCHES

Baptist churches throughout the United States have the largest total membership of any single Protestant denominational group in the country. In 1967 the *Yearbook of American Churches* noted 29 autonomous Baptist bodies, whose membership represents about one third of all American Protestants. The Southern Baptist Convention is the largest Baptist group. Ranking next in size is the National Baptist Convention, U. S. A., Inc., followed by the National Baptist Convention of America and the American Baptist Convention.

AMERICAN BAPTIST CONVENTION

The American Baptist Convention, which was known until 1950 as the Northern Baptist Convention, represents a total of 6,164 Baptist churches in 47 states. The convention maintains its national offices at Valley Forge, Pa. It is affiliated with the Baptist World Alliance, the National Council of the Churches of Christ in the U. S. A., and the World Council of Churches.

Missionary and benevolent work and Christian education in the United States, Africa, Asia, and Latin America are conducted by the convention through 5 national societies and boards, 37 state conventions, and 13 city societies. This work is supported by contributions (amounting to $15.6 million in 1968) from Baptist churches to the American Baptist Mission budget, representing the interests of all Baptist agencies, plus about $7 million from other sources. In addition, a world mission campaign is being conducted in 1966–68 to raise $20 million for the capital needs of home and overseas missions.

At the convention's annual meeting in May 1967, held in Pittsburgh, Pa., L. Doward McBain, pastor of the First Baptist Church, Phoenix, Ariz., was elected president of the body for the year 1967-68.

Church periodicals include *Mission* and *Crusader*, both published in Valley Forge, Pa.

Edwin H. Tuller
American Baptist Convention

SOUTHERN BAPTIST CONVENTION

The Southern Baptist Convention is the largest body of Baptists in the United States. In 1966 it had a total of 33,949 churches in 50 states. At the 1967 convention held in Miami Beach, Fla., H. Franklin Paschall, pastor of the First Baptist Church, Nashville, Tenn., was reelected president.

The 73 Southern Baptist educational institutions reported a 1966–67 enrollment of 102,250 and endowments of $137,501,144. Six seminaries—at Louisville, Ky.; New Orleans, La.; Fort Worth, Texas; Mill Valley, Calif.; Wake Forest, N. C.; and Kansas City, Mo.—enrolled 4,912 students. The American Baptist Theological Seminary for Negroes, at Nashville, Tenn., had 61 students.

The convention's 32 children's homes cared for 4,283 children and owned property valued at $39,529,660. It also supported 2,208 foreign and 2,165 home missionaries. The annuity board reported 54,000 members, with assets of $169 million.

Executive committee officers of the convention are in Nashville, Tenn. The Baptist Sunday School Board, also in Nashville, published and distributed 45 million copies of 44 quarterlies, and 28 million copies of 9 monthly publications.

Porter Routh
Southern Baptist Convention

BARBADOS

The Caribbean island of Barbados completed its first year as an independent nation on Nov. 30, 1967, and during the year asserted itself on the international scene. A member of the United Nations since December 1966, it became in October 1967 a member of the Organization of American States. As a member of the Commonwealth of Nations, Barbados received with pleasure the announcement by Queen Elizabeth of the appointment in May of the first native governor-general, Arleigh Winston Scott. On Barbados Day (Sept. 21, 1967) at Expo 67 in Montreal, Prime Minister Errol W. Barrow delivered the principal address, in French, showing his nation's concern for its international role.

The College of Arts and Science, the Barbados division of the University of the West Indies, graduated its first class in February 1967. The college was established, and the first students registered, in 1963.

Internationl Conferences. Barbados was the site of several international conferences in 1967. These included meetings of the Caribbean Shipping Council, the Caribbean Meteorological Council, the first Caribbean Family Planning Seminar, the sixth conference of the Caribbean Association on Mental Health, and the West Indian and Commonwealth delegates who gathered to discuss the crisis created by Anguilla's announcement of withdrawal from its union with St. Kitts and Nevis.

Economy. Barbados' small area is forced to support a population that is now estimated at nearly a quarter of a million (with a density of 1,465 persons per square mile, or 572 per sq km) and is growing at a net annual rate of about 2%. Sugar is the mainstay of the economy, as it has been for more than 300 years. Tourism, the second industry, continues to increase its contribution to the economy, which showed a growth of more than 5% in the gross national product during 1967.

BARBADOS • Information Highlights

SOUTH AMERICA

Area: 166 square miles (430 sq km).
Population: 245,000 (July 1, 1966 est.).
Chief City (1960 census): Bridgetown, the capital, 11,452.
Government: *Governor-General*—Arleigh Winston Scott (appointed May 1967); *Prime Minister*—Errol Walton Barrow (took office for 2d 5-year term, Nov. 3, 1966). *Parliament*—Senate, 21 members; House of Assembly, 24 members (party seating, 1967: Democratic Labour party, 14; Barbados Labour party, 8; Barbados National party, 2).
Religious Faiths: Anglicans, 70% of population.
Education: *Total school enrollment* (1964)—55,011 (primary, 39,173; secondary, 15,431; higher, 407).
Finance (1964–65 est.): *Revenues*, $18,949,000; *expenditures*, $19,272,000; *public debt*, $20,200,000; *monetary unit*, East Caribbean dollar (2.0 EC dollars equal U. S.$1 as of Nov. 21, 1967).
Gross National Product (1964): $97,000,000.
National Income (1964): $83,000,000.
Cost of Living Index (1965) 112 (1958=100).
Manufacturing (metric tons): Sugar (1966–67), 211,000.
Crops (metric tons, 1964–65 crop year): sugarcane, 1,991,000.
Foreign Trade (1966): *Exports*, $40,122,000 (chief export, 1965: cane sugar, $19,490,000); *imports*, $76,400,000.
Transportation: *Roads* (1966), 840 miles (1,352 km); *motor vehicles* (1965), 14,884 (automobiles, 11,391).
Communications: *Telephones* (1966): 15,628; *TV sets* (1965), 6,000; *radios* (1965), 43,000; *newspapers* (1965), 2.

During the year the government revised the Hotel Aids Act and the Pioneer Industries Act to provide additional incentives for building hotels and establishing new industries. The United Nations Fishery Project started to train West Indian fishermen, who, it is hoped, will contribute to a Caribbean-based fishing industry.

THOMAS G. MATHEWS
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BELGIUM

The general slowdown of economic activity in western Europe spread to Belgium in 1967. Domestic demand was down, exports fell off, and the influx of foreign investments declined. Industrial growth came to an almost complete halt. In 1964 the government had begun to impose restraints to curb the inflationary boom, but wages and prices continued to rise into 1967. Unemployment, chiefly localized because of labor immobility, was higher.

Domestic Affairs. Belgium came out of World War II with its industrial plant relatively intact. The nation was able to attain postwar prosperity without modernizing its plant, but by 1967 the economy was in trouble. Industry has been slow to adopt modern managerial attitudes; industrial costs are relatively high and productivity relatively low; and less money is spent on research than in any other major western European country.

The hard-hit coal industry continued to decline in 1967, and more uneconomical mines were scheduled to be closed. It is alleged that poorly planned regional industrial policies were the consequence of giving undue consideration to balancing advantages between Belgium's two feuding linguistic groups—the Flemings and the Walloons. Foreign enterprises tend to locate in the Flemish north, with its superior transportation system, although they are offered incentives to locate in the Walloon south, where unemployment is high because of mine closings.

In April 1967 parliament gave the government of Paul Vanden Boeynants special powers to stimulate investment and industrial restructuring, to speed up regional development programs, and to improve the budgetary position through tax increases and reductions in expenditures. The bank interest rate was lowered four times during the year. The Fund for Economic Expansion and Regional Reconversion went into operation on July 1.

Belgium's socialized medical services again came under hard scrutiny. An error in a Brussels pharmaceutical house resulted in the deaths of at least 20 cancer patients in a clinic of a type already under severe criticism by Belgian doctors.

In a national disaster of major dimensions, over 300 persons were killed or injured on May 22 when a fire swept L'Innovation, Brussels' second largest department store.

Foreign Affairs. Relations with the former Belgian Congo reached a low point in the summer of 1967. At the end of 1966 the Congolese government took over the assets of Union Minière du Haut Katanga, allegedly because the company refused to transfer its headquarters from Brussels to the Congo and thus bring its operations fully under Congolese law. Shortly after the kidnapping of Congolese ex-

BELGIUM • Information Highlights

Area: 11,781 square miles (30,513 sq km).
Population: 9,499,234 (Dec. 31, 1966, est.).
Chief Cities (1965 est.): Brussels, the capital, (met. area), 1,065,921; Antwerp, 243,426; Ghent, 157,834; Liège, 155,420.
Government: *King*—Baudouin I (born 1930; acceded 1951); *Premier*—Paul Vanden Boeynants (took office March 19, 1966). *Parliament*—Chamber of Representatives, 212 members (party seating, 1967: Christian Social, 77; Socialist, 64; Freedom and Progress, 48; Flemish People's Union, 12; Communist, 6; others, 5); Senate, 151 members (party seating, 1967: Christian Social, 76; Socialist, 25; Freedom and Progress, 40; Flemish People's Union, 5; others, 5).
Religious Faiths: Roman Catholics, 95% of population.
Education: *Total school enrollment* (1964)—1,811,625 (primary, 967,124; secondary, 300,406; teacher-training, 24,840; technical, 443,766; university, 75,489).
Finance (1966 est.): *Revenues*, $4,019,890,000; *expenditures*, $4,361,638,000; *public debt*, $10,059,940,000; *monetary unit*, franc (50 francs equal U. S.$1).
Gross National Product (1966): $18,109,890,109.
National Income (1966): $14,305,694,205; average annual income per person, $1,611.
Economic Indexes (1966): *Industrial production*, 150 (1958=100); *agricultural production*, 130 (1956–57=100); *cost of living*, 120 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 8,916,000; cement, 5,796,000; gasoline, 2,207,000.
Crops (metric tons, 1966–67 crop year): Sugar beets, 2,643,000; potatoes, 1,047,000; wheat, 660,000.
Minerals (metric tons): Coal (1966), 17,508,000; lime (1965), 2,291,082; quartz and quartzite (1964), 304,572.
Foreign Trade (including Luxembourg; 1966): *Exports*, $6,830,000,000 (chief exports, 1965): iron and steel, $1,143,858,000; textile yarn, $591,082,000; *imports*, $7,174,000,000 (chief imports, 1965: road motor vehicles, $531,678,000; nonindustrial diamonds, $228,584,000). *Chief trading partners* (1965): West Germany (took 21% of exports, supplied 19% of imports); France (took 14% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 58,036 miles (93,397 km); *motor vehicles* (1965), 1,572,720; *railways* (1965), 2,760 miles; *national airline*, Sabena; *principal airport*, Brussels.
Communications (1967): *Telephones*: 1,665,508; *TV stations*, 16; *TV sets*, 1,700,000; *radios* (1965), 3,026,000; *newspapers* (1965), 54 (circ. 1,701,000).

Premier Moise Tshombe on June 30, 1967, white mercenaries and Katangese forces in the Congolese Army mutinied. Although some of the mercenaries and their leader were Belgians, the Brussels government condemned their activities. In the ensuing wave of anti-Belgian feeling, 25 Belgians were killed. The Brussels government formally charged the Congolese authorities with direct responsibility for the sacking of the Belgian embassy in Kinshasa.

From all sides there was pressure on the government to end assistance to the Congo. On July 28 the premier announced the cutting off of all military aid, amounting to $3.6 million annually, except for the training of Congolese officers in Belgium. All Belgian judges sitting in Congolese courts were withdrawn. It was also announced that Belgium would seek to put its technical aid into a multilateral framework, but this would depend on the cooperation of international agencies. On August 28 the government decided to hold up most of its technical assistance until the safety of personnel was guaranteed by the Congo. On October 27, Belgium announced that the Kinshasa government had met these demands and that the aid program was being restored.

Supreme Headquarters, Allied Powers, Europe (SHAPE) on March 31 opened its military headquarters at Casteau, Belgium, after its expulsion from France. Political headquarters of NATO were opened at Evere, a suburb of Brussels, on October 15. Eventually, permanent headquarters buildings will be constructed on the site of the 1958 Brussels Fair. (See also NORTH ATLANTIC TREATY ORGANIZATION.)

The executive commissions of the EEC, Euratom, and ECSC were merged on July 1. The new commission has its headquarters in Brussels. (See also EUROPE.)

Belgium has agreed to join with West Germany and the Netherlands in a $100-million project to build a fast breeder nuclear reactor capable of generating 300 megawatts of electric power.

AMRY VANDENBOSCH
University of Tennessee

KEYSTONE PRESS

KING BAUDOUIN I of Belgium visits the wreckage of L'Innovation, the Brussels department store destroyed by a disastrous fire on May 22.

BIOCHEMISTRY

Biochemists, striving to understand life processes in terms of the complex interactions of the atoms, molecules, and compounds that make up a living organism, have broadened the frontiers of their science and gained exciting and stimulating knowledge in this field. In 1967 many imaginative and ingenious approaches were used to advance man's understanding of living systems.

Nucleic Acids and Protein Synthesis. Within the past decade, the most concentrated efforts of biochemists have been directed toward determining the mechanisms of gene action, the subsequent synthesis of proteins, and the regulation of these processes. From these studies came the understanding that in addition to a protein's primary structure—the unique structure that each protein possesses as a result of its amino acid composition—the characteristic folding of a biologically active protein is essential and critical for each protein. In studies at Princeton University, biochemists in the laboratory of J. R. Fresco have shown that the biological activity of transfer RNA (tRNA) molecules, the nonprotein nucleic acid molecules important in the assembly of proteins, also depends on their unique stereochemical conformation (that is, the spatial arrangement of the molecule's components).

Important progress has been made in deciphering nucleotide sequences of tRNA molecules. At the University of Wisconsin, U. L. Raj Bhandary and H. G. Khorana have worked out the nucleotide sequence of the type of tRNA known as phenylalanine tRNA, the molecule that recognizes the nucleotide triplet (called a codon) for the amino acid phenylalanine on the messenger RNA molecule. Although this was not the first nucleotide sequence to be established for tRNA molecules, this work allows a comparison of the sequences of tRNA molecules with different specificities. It should now be possible to determine those sequences that are common to all tRNA molecules as well as those that are unique for each particular molecule.

Studies of protein synthesis have also shed some light on one of the most perplexing problems in nutritional biochemistry—the action of vitamin D. This vitamin has long been known to increase the absorption of calcium and phosphorus in the small intestine and to play a role in the mobilization of bone salts, releasing calcium and phosphorus into the blood. It also is involved in the reabsorption of phosphorus in the kidneys. For many years, there appeared to be no direct action on any known specific biochemical system, but in 1967 Hector DeLuca discovered that a metabolically active form of vitamin D induces the selective reading of a particular nucleotide sequence of DNA to form a specific messenger RNA. This messenger RNA is coded for producing proteins necessary for calcium transport systems and mineral mobilization from bone.

Some experiments on protein synthesis in 1967 involved work concerning the complex functioning of the brain. Bernard Agranoff, who worked with goldfish, and F. J. Barondes, who worked with rats, showed that substances that inhibit the synthesis of protein may interfere with memory, causing an animal to forget what it has learned.

One of the most interesting discoveries concerning nucleic acids stemmed from work on scrapie, an infectious disease of sheep. Scrapie has been known to be caused by an agent with unusual properties, but generally assumed to be a small virus. The experiments of Tikvah Alper showed that the scrapie agent, although capable of self-duplication, does not contain nucleic acid. While a plausible explanation may soon be forthcoming, some scientists fear that the whole theoretical structure of molecular biology may come tumbling down. Although these fears are probably unfounded, an elucidation of the nature of the scrapie agent will be a valuable addition to the understanding of fundamental biochemical principles.

Biochemical Technology. Advances in analytical instrumentation often allow biochemists to obtain powerful tools for studying living systems. B. E. Knox and F. J. Vastola, both of Pennsylvania State University, have coupled a laser microprobe with a time-of-flight (TOF) mass spectrometer. The laser allows the biochemist to vaporize an area of tissue as small as 100 square microns, and the mass spectrometer then analyzes the chemical components of the sample. Using this device, biochemists can determine the precise location of different molecules within a tissue and can study changes in the amount and location of molecules within very small areas.

A recent development in gas chromatography has offered a solution to a problem that has plagued analytical biochemists for years. C. W. Gehrke and D. L. Stalling at the University of Missouri have developed a method for analyzing all of the 20 naturally occurring amino acids, using gas liquid chromatography (GLC). This new technique involves preparing derivatives of the amino acids, separating them in a GLC instrument with temperature programming, and identifying them by a flame ionization detector. With this method, biochemists can rapidly and quantitatively determine the amino acid composition of much smaller samples than has previously been possible.

Search for Future Food Supplies. For many years biochemists have studied ways in which protein-rich microorganisms could be produced in large quantities and be made nutritious and palatable. The urgency of world food needs and the substantial progress toward the use of microorganisms as a food supply resulted in the International Conference on Single Cell Protein, which was held in October at the Massachusetts Institute of Technology.

This conference brought together biochemists, toxicologists, economists, nutritionists, and scientists in other related fields to discuss the remaining difficulties confronting those involved in making single-cell proteins a valuable addition to the world's food supply. The conference stressed the fact that microorganisms are good sources of high-quality protein and that they have the ability to convert inexpensive sources of energy and nitrogen into protein without using agricultural land or any products of agriculture. The present problems confronting scientists concern the industrial production, the flavor, and the possible toxicity of the microorganisms.

(See also BACTERIOLOGY.)

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BIOLOGY. See BIOCHEMISTRY; BOTANY; GENETICS; MARINE BIOLOGY; ZOOLOGY.

BIRTH RATES. See POPULATION.

BLAKE, Eugene Carson. See biographical sketch under RELIGION.

BLINDNESS. See EYE DISEASES.

LONDON DAILY EXPRESS

LONDON DAILY EXPRESS

SIR FRANCIS CHICHESTER, having sailed alone around the world in the 53-foot ketch *Gipsy Moth IV*, arrived (above) in Plymouth, England, May 28.

BOATING

Pleasure boating continued its rapid expansion in 1967. At the end of the year there were 8,275,000 pleasure boats of all types in the United States, compared with about 8,000,000 at the beginning of 1967. The number is expected to total over 8,500,000 by Jan. 1, 1969. Fishing, cruising, water skiing, and hunting, in that order, continued, as in the past five years, to be the major activities that have led to boat ownership.

Sales. The pleasure boating industry registered a 5% retail business increase in 1967 over 1966, bringing sales to over $3 billion for the first time in the history of the industry. Manufacturers' sales of both inboard and outboard boats, outboard motors, and inboard engines held about steady or showed a slight loss. The major sales increases occurred in inboard-outdrive powered boats, boat trailers, hardware, and accessories, all of which rose about 10% over the previous year.

Unit sales in each product category, however, still lagged behind the record levels of 1961. Increased emphasis on service and the sale of replacement parts and used equipment raised dealer incomes to record highs in 1967. Nevertheless, profits remained steady because of the increased costs of transacting business.

Of special significance was the increased interest manifested in air-conditioning units for boats, houseboats, and allied water sports equipment. More than 40,000 canoes and 37,000 sailboats of all sizes were sold in 1967, reflecting slight gains over 1966. Outboard motor sales totaled 444,000 units; outboard boats, 260,000 units; boat trailers, 160,000 units; and houseboats, more than 1,000 units. At the same time, 36,000 inboard-outdrive boats and 36,000 inboard boats were sold. The sales of inboard-outdrive power plants increased from 40,000 in 1966 to 46,000 in 1967. Industry authorities predicted that there would be a 50,000-unit market in 1968.

Industry Trends. Diversification among boating retailers to combat the seasonal slumps in the business continued, with major activity in investments in snowmobiles and snowmobile equipment and in mobile campers and camper equipment. Considerable activity, however, was evident in the areas of nautical clothing, surfside restaurants, nautical giftwares, and fishing gear.

SIR FRANCIS CHARLES CHICHESTER, British yachtsman, aviator, and author, made a 28,500-mile solo journey around the world in a 53-foot ketch. He left Plymouth, England, on Aug. 27, 1966, and reached Sydney, Australia, on Dec. 12, after 107 days at sea. He returned by way of Cape Horn in 119 days, arriving in Plymouth, England, on May 28, 1967. Although others had sailed alone around the world, the 65-year-old Chichester had sailed farther and in less time than any other man in nautical history.

Sir Francis was born in North Devon, England, on Sept. 17, 1901. At an early age he piloted airplanes. He flew solo from Croydon, England, to Sydney in 1929; the next year he made the first long-distance seaplane flight—across the Tasman Sea from New Zealand to Australia. Among his many publications are *The Lonely Sea and the Sky* (1964) and *Along the Clipper Way* (1966). Early in 1967 he was designated a Knight Commander of the Order of the British Empire, and on July 7 he was dubbed a knight.

Fiber glass continued to be the predominant boat-building material, with aluminum a strong contender for use in such smaller boats as canoes, rowboats, prams, and runabouts. The trend continued strong in 1968 models toward an increased use of chrome and upholstery, wall-to-wall waterproof carpeting, and builder-installed accessory items. Added emphasis on engineering and safety was also evident in most of the new models.

Jet-drive boats continued to receive wide acclaim, although only 1,000 were sold in 1967. Improved engineering has overcome most of the problems associated with this type of power, and it is being gradually accepted.

A shortage of berthing facilities still exists in some places, despite the rapid increase in marina facilities.

With local, state, and federal pressures increasing to stop the pollution of boating waters, considerable improvement can be expected in this area within the next year or so. Some federal action on product safety and boat operation is also likely.

CHARLES A. JONES
Editor, "Boating Industry"

BOLIVIA

Stability, always tenuous in this high Andean country, was severely shaken during 1967. Strikes in the economically vital tin mines, harassment from powerful student unions, and continuing attacks from guerrilla bands in southeastern Bolivia plagued the new government of René Barrientos Ortuño. By the end of the year, however, these problems seemed somewhat under control, and the economy was pushing ahead.

Guerrillas. About March 23, the Bolivian government discovered the presence of a well-armed band of guerrillas in the southeastern jungles near Sucre. It was suspected and later confirmed that the forces, which called themselves the National Army of Liberation and numbered about 50 men, were led by the Argentine-born Cuban revolutionary leader Ernesto (Che) Guevara. In several clashes which ensued between the well-trained guerrillas and the inadequate Bolivian forces, the guerrillas were victorious. On April 12 the Bolivian government outlawed the Communist party, and on June 7 it declared a state of siege.

The tide began to turn in mid-August, when government forces, reinforced by U. S.-trained troops, seized four arms caches and began a policy of encirclement of the guerrilla camps. By the middle of September, the guerrillas were known to be suffering supply shortages, and had switched to a defensive position.

Perhaps the most severe blow against the guerrillas was struck when Bolivian government forces claimed to have killed Guevara on October 9. Although the body reportedly was cremated almost immediately, proofs offered included witnesses, photographs, and fingerprints. Guevara's death was confirmed by Fidel Castro in Cuba on October 15, although a denial was issued by Guevara's family. By mid-November, the guerrilla band was almost entirely dissolved.

The Debray Affair. A French leftist intellectual and confidant of Fidel Castro, Jules Régis Debray, was arrested while unarmed and wearing civilian clothes in the guerrilla area on April 20. He claimed to be there solely as a journalist. Despite international protests and pleas for leniency, including one from French President de Gaulle, Debray was sentenced to 30 years in a Bolivian military prison on November 17 for his alleged participation as "murderer" in the guerrilla movement. The prosecution produced documents taken from Guevara indicating that Debray was acting as a liaison between Castro and Guevara.

Strikes and Demonstrations. Miners in the government-owned tin mines, apparently encouraged by the early success of the guerrillas, went on strike in protest against the rigid military control by the Barrientos government. The tin mines of Bolivia, among the world's greatest deposits of that metal, have been long-time centers of opposition to the government. By the end of the year, however, the mines were under military control and production was rising.

Students in a number of cities rioted during 1967. At year-end, students still held the right to demonstrate, with the understanding that the government would step in (as it did in La Paz and Cochabamba) if demonstrations got out of control.

Political Affairs. The coalition of 4 parties and 2 political factions making up the Bolivian Revolutionary Front (FRB), which brought Barrientos to power in 1966, had nearly dissolved by the summer of 1967, partly through disagreement over sections of a new Bolivian constitution, and partly through disapproval of Barrientos' strict military controls. On August 5, Barrientos named a new 3-party coalition cabinet. It was expected that the opposition would wait for the 1970 election campaigns.

Foreign Affairs. Barrientos pushed for Bolivian access to the sea in 1967, and received some encouragement from Chile and Peru. In February, Bolivia became a member of the Latin American Free Trade Association.

Economic Affairs. The economic climate of Bolivia was fairly good in 1967. Tin prices increased, while the demand for tin and other metals remained strong, causing total metal exports to rise. Foreign concerns continued to invest in Bolivia.

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Mississippi State University

BONDS. See Stocks and Bonds.

BOLIVIA • Information Highlights

SOUTH AMERICA
AFRICA

Area: 424,162 square miles (1,098,581 sq km).
Population: 3,801,000 (July 1, 1967, est.).
Chief Cities (1965 est.): Sucre, the nominal capital, 58,549; La Paz, the seat of government, 366,487.
Government: *President*—René Barrientos Ortuño (took office Aug. 6, 1966); *Vice President*—Luis Adolpho Siles Salinas (elected July 3, 1966). *Parliament*—Senate, 27 members (party seating, 1967: Bolivian Revolutionary Front (FRB), 18; Christian Democratic Community (CDC), 8; Pazestenssorist Revolutionary Movement (MRP), 1); Chamber of Deputies, 102 members (party seating, 1967: FRB, 82; CDC, 19; MRP, 1).
Religious Faiths: Roman Catholics, 94% of population.
Education: *Literacy rate* (1960), 60% of population aged 10 and over. *Total school enrollment* (1965)—630,853 (primary, 526,883; secondary, 78,380; teacher-training, 6,109; technical, 8,391; higher, 11,090).
Finance (1965 est.): *Revenues,* $53,200,000, *expenditures,* $77,090,000; *monetary unit,* peso (11.88 pesos equal U. S.$1).
Gross National Product (1965): $792,000,000.
National Income (1965): $531,000,000; average annual income per person, $144.
Economic Indexes: *Industrial production* (1965), 139 (1958=100); *cost of living* (1966), 184 (1958=100).
Manufacturing (metric tons, 1965): Gasoline, 139,000; sugar (1966), 88,000; cement, 60,000; beer, 21,700.
Crops (metric tons, 1965–66 crop year): Cassava (1964–65), 174,000; barley (1964–65), 120,000; dry broad beans, 7,000.
Minerals (metric tons, 1965): Tin, 23,723 (ranks 2d among world producers); antimony, 8,766 (world rank, 3d); crude petroleum (1966), 39,240; lead ore, 17,500; zinc (exports), 13,700; silver (exports), 4,115,295 troy ounces.
Foreign Trade (1966): *Exports,* $147,700,000 (chief exports: tin, $93,300,000; silver, $6,600,000; lead, $6,400,000; tungsten, $5,100,000); *imports,* $130,500,000 (chief imports, 1964: wheat flour, $10,830,000; motor vehicles, $3,810,000). *Chief trading partners* (1965): U. S. (took 43% of exports, supplied 43% of imports); Britain (took 44% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 15,094 miles (24,291 km); *motor vehicles* (1965), 30,130 (automobiles, 16,504); *railways* (1965), 1,734 miles (2,790 km); *national airline,* Lloyd Aéreo Boliviano; *principal airport,* La Paz.
Communications: *Telephones* (1966): 25,235; *radios* (1965), 525,000; *newspapers* (1965), 9 (daily circulation, 95,000).

BOOK PUBLISHING

With an estimated sales increase of 10% over 1966, nearly $3 billion was spent by book purchasers in the United States in 1967. This figure represents a book sales increase amounting to almost $1 billion over the past five years. A report on 5-year trends in book sales was released by the American Book Publishers Council in late 1967. Translating these publishers' receipts into consumer purchases, the American public purchased $2 billion worth of books in 1963; by 1966 the gross national book product had risen to $2.7 billion.

There were book sales increases of 10% in 1964 and 1965, and in 1966 there was a sharp increase of 18%, reflecting what the council refers to as a "one time impact of new Federal education and library programs."

These upward trends are to be found in all segments of publishing—adult trade, juvenile, Bibles, technical, business, book clubs, mass-market paperbacks, and others. The number of titles published has gone up each year as have book prices. Titles published in 1967 (based for the first time on figures obtained by a new standard of computation) totaled 28,762, compared with 30,050 in 1966. Comparative figures for the two years in the major categories (with 1966 figures in parenthesis) were: fiction, 3,080 (3,018); religion, 1,864 (1,809); science, 2,367 (2,958); technical, 1,252 (1,333); juvenile, 2,711 (2,713); education, 905 (1,040).

Not only did the domestic market continue to rise, but overseas sales were equally strong. American publishers have been devoting much time to improving the foreign market through their own efforts and in collaboration with the government. A national policy statement on international book and library activities, approved by President Johnson on Jan. 4, 1967, and issued to all agencies concerned with the U. S. government's international book and library programs, has stepped up the effectiveness of the 6-year-old government advisory committee on international book programs.

Best Sellers. The character of any publishing year is highlighted by the nature of the various best-seller lists. In 1967 a number of exciting new titles appeared on the lists.

The 20 most sought-after books were: (fiction) *The Arrangement* by Elia Kazan, *The Chosen* by Chaim Potok, *Christy* by Catherine Marshall, *The Confessions of Nat Turner* by William Styron, *The Eighth Day* by Thornton Wilder, *The Gabriel Hounds* by Mary Stewart, *Night Falls on the City* by Sarah Gainham, *Tales of Manhattan* by Louis Auchincloss, *Topaz* by Leon Uris, and *Washington, D. C.* by Gore Vidal; (nonfiction) *Death of a President* by William Manchester, *Edgar Cayce—The Sleeping Prophet* by Jess Stearn, *Madame Sarah* by Cornelia Otis Skinner, *A Modern Priest Looks at His Outdated Church* by Father James Kavanaugh, *The New Industrial State* by John Kenneth Galbraith, *Nicholas and Alexandra* by Robert K. Massie, *Our Crowd* by Stephen Birmingham, *Paper Lion* by George Plimpton, *Too Strong for Fantasy* by Marcia Davenport, and *Twenty Letters to a Friend* by Svetlana Alliluyeva.

These books, appearing as best sellers for the first time in 1967, are listed alphabetically by title and represent a composite of national best-seller lists with no attempt to establish their relative standings. These books were of sufficient interest to the reading public to keep them near the top of the best-seller lists for a considerable length of time.

An outstanding feature of the 1967 publishing record was the increased number of art books, illustrated histories, biographies, and other expensive "coffee table" volumes.

Mergers. Several newsworthy mergers took place within the book industry. The most notable of these was the acquisition by a major communications giant, the Columbia Broadcasting System, of Holt, Rinehart & Winston.

Censorship. There were no spectacular censorship clashes at the state or federal level, although the 1967 crop of books produced, in the opinion of many observers, some of the most censorable titles yet to reach the bookstores.

Manufacturing. Book manufacturing facilities remained in short supply. Toward the end of 1967, however, the slackening on governmental textbook purchases brought about a sharp drop in plant activity. Book manufacturers experienced what they hoped would be only a temporary setback to the booming book economy.

JOSEPH A. DUFFY
American Booksellers Association

BOSTON

In a mayoralty contest which caught the attention of the nation, Kevin H. White defeated Mrs. Louise Day Hicks in the November 1967 elections. Mrs. Hicks, a member of the School Committee, who campaigned for repeal of the state law requiring Boston to achieve racial balance in its schools, encountered strong opposition from the Negro section of the city. White, who had served as Massachusetts secretary of state since 1961, finished second to Mrs. Hicks in a preliminary election in September which eliminated eight other candidates. He later secured the support of Sen. Edward Kennedy and business leaders, and won 54% of the vote.

Other Election Results. Boston (1965 est. pop.: city, 670,000; metropolitan area, 3,201,000) elected nine city councillors and five School Committee members in 1967. Among the five newcomers to gain seats on the City Council was Thomas Atkins,

BOSTON'S mayoralty race loser, Mrs. Louise Day Hicks, congratulates the winner, Kevin White, at the conclusion of a campaign that was marked by racial overtones.

UPI

the first Negro to be elected since the present system began in 1951. Three of the five school committeemen were newly elected. Although the election was nonpartisan, all those elected were Democrats.

Race Relations. Boston was the scene of serious Negro rioting on June 3–5. After police broke up a sit-in at the office of the city welfare department in the Grove Hall section of the Roxbury district by a group calling itself Mothers for Adequate Welfare, rioting flared through the predominantly Negro community. At least 68 persons were injured. Mayor John F. Collins granted some of the protesters' demands but refused to request the resignation of the welfare commissioner. The rioting subsided but discontent continued in the area over welfare, employment, housing, and education.

In spite of state law and the agreement between the School Committee and the state board of education to close two Negro schools and transfer the pupils (thereby releasing frozen state funds), six more schools become predominantly Negro in 1967. Of the 92,441 pupils enrolled in the city's public schools in October, 25,482 were nonwhite. During the year, the number of white pupils dropped by 1,091 while nonwhites increased by 1,405.

Urban Renewal. Boston's extensive urban renewal program moved ahead in 1967. The new City Hall neared completion in the Government Center. Demolition began in the waterfront area, and plans for the renewal of the central business district were accepted by the City Council. In the Fenway area, work continued on a large building project of the Mother Church of the First Church of Christ, Scientist. (see also CHRISTIAN SCIENCE.)

Economy. During the mayoralty campaign, attention was focused on the role of the port of Boston in the city's economy. Imports through the port rose sharply in 1966 to 7,111,054 tons, up almost 800,000 tons over 1965; but exports, at 494,649 tons, continued to decline, showing a decrease of more than 100,000 tons for the year.

The value of products manufactured in Boston in 1965 was $1,713,349,362, and total value for the 18 communities of the Greater Boston Industrial area was $3,733,661,026. Both figures showed increases over 1964. The number of employed production workers in September 1967 in the metropolitan area was 300,500, with average weekly earnings of $118.19.

Finance. In 1967 the city tax rate rose sharply from $101.80 (1966) to $117.80. The city budget was set at $165,315,854 for the 1967 fiscal year.

Newspapers. After over a century of publication, the Boston *Traveler* ceased operation in May. The closing of the *Traveler* left Boston with two afternoon papers and four morning papers.

Baseball. The dramatic finish of the 1967 American League pennant race whipped up this traditionally staid city into a near frenzy. The beloved Red Sox won the pennant on the final day of the season, but then lost to the St. Louis Cardinals in the 7th game of the World Series.

GEORGE D. BLACKWOOD
Boston University

BOTANY

Subjects of investigation in this field in 1967 included employment of new techniques in biological experiments, the longevity of seeds, species survival, life on other planets, and the relationship between structure and function.

Taxonomy. The use of terpenoids, flavonoids, amino acids, enzymes, proteins, and other compounds has been demonstrated to be of value in helping to understand the relationships that exist between plants. A. J. Bendich and E. T. Bolton (*Plant Physiol., 42:* 959–967) have now demonstrated the use of the DNA-agar technique to measure the relatedness among higher plants (rye, wheat, barley, and others).

The interest in these types of investigations (chemotaxonomy or chemosystematics) has increased with the expansion of data from biochemical, immunochemical, and organic chemical research and with the development of relatively quick and simple analytical techniques. To construct any type of classification, the *sum total* of characteristics from diverse disciplines must be interpreted and evaluated. Now chemical data are beginning to be more regularly incorporated with other data in the establishment of taxonomic (descriptive) profiles (encyclopedic information) for each species, genus, or family.

Longevity of Seeds. Every few years the questions are asked once again of botanists: How long can a seed remain dormant and still germinate? How old can a seed be and still sprout? In 1967 three Canadian botanists—A. E. Porsild, C. R. Harington, and G. A. Mulligan—reported (*Science, 158:* 113–114) the germination of seeds of the Arctic lupine (*Lupinus arcticus*) which were at least 10,000 years old. A mining engineer found some two dozen seeds in ancient lemming burrows buried in frozen silt of Pleistocene age. These seeds were grown to maturity and were found to be the same as the Arctic lupine that can be seen in the tundra and subalpine forests of today. Previously, the oldest seeds that had germinated belonged to the sacred lotus (*Nelumbo nucifera*): these were 2,000 years of age when found in 1951.

Adaptive Features. The reasons why some species survive much longer than others are of interest to many biologists. Fossil records demonstrate that the group of trees known as Ginkgoales, of which today's *Ginkgo biloba* is the sole living member, dates back 200 million years. Partial responsibility for the persistence of this species is attributed to the longevity of the tree (1,000 years) and to the consequent long reproductive period. It has been shown by R. T. Major (*Science, 157*: 1270–1273) that this longevity also can be attributed to the resistance of this species to pests, such as insects, bacteria, viruses, and fungi.

ARCTIC LUPINES have recently been grown from seed that had lain dormant in the Yukon for over 10,000 years.

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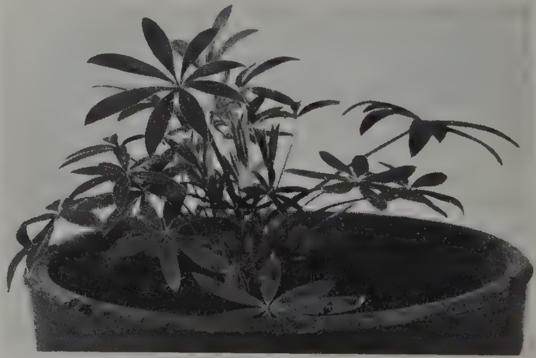


Botanists are constantly trying to understand the structure of plants in relation to function and selective adaptation. W. D. Billings and P. J. Godfrey (*Science, 158*: 121–123) demonstrated that hollow-stemmed plants have a physiological advantage over plants with filled stems since some of the respired CO_2 may be used in photosynthesis within the stem. This results in more efficient use of CO_2 at high altitudes where the partial pressure of ambient CO_2 is relatively low. According to the botanists, until the plant's leaves are fully expanded and the weather becomes favorable for plant growth, internal stem photosynthesis may be the major photosynthetic system of plants in cold, high-altitude, wet meadows with a short growing season.

Exobotany. The possibility of growing plants on other planets has stimulated experimental design in various laboratories. Seed germination tests in atmospheres containing various gases have been a part of several biological space program experiments. It has been discovered that seeds of several species can be germinated in rarefied nitrogen atmospheres containing high proportions of individual nitrogen oxides or their mixtures (S. M. Siegel, C. Giumarro, and O. W. Daly. *Nature, 209*: 1330–1334). These scientists indicated that plant growth in an atmosphere rich in nitrogen oxides was apparently possible, provided the substratum prevents excess acidity and that NO_2 is not present in overly great quantities. S. M. Siegel, C. Giumarro, and R. Latterell (*Proc. Natl. Acad. Sci., 52*: 11–13) have shown that seed germination and seedling growth of some vascular plants can occur with little or no oxygen.

Experiments designed to test the effects of radiation and weightlessness (which are conditions of travel in space) on living organisms continue to generate much interest among scientists. The flight of the United States' Biosatellite 2 in September 1967 marked the first time that biologists have been able to establish controlled laboratory conditions in space. The preliminary data indicate that there is variation in certain characteristics when plants are grown in space. Wheat seedlings grew faster in space than on earth, and roots of the spaceborne seedlings curved upward toward the shoots and out to the side. The leaves of pepper plants flown within the satellite curved downward on the stem. (See also SPACE EXPLORATION.)

DAVID E. FAIRBROTHERS
Rutgers—The State University

BOTSWANA

Attempts to bridge antagonisms between white-ruled southern Africa and independent countries to the north, and continued economic reliance on South Africa were Botswana's main concerns in 1967.

Foreign Relations. During the first year of Botswana's independence (beginning Sept. 30, 1966), President Sir Seretse Khama attempted to make his country a link between the white-ruled countries of southern Africa—South Africa, South West Africa, and Rhodesia—and the independent African countries to the north.

On a state visit to Malawi in early July, President Khama issued a joint statement with President Hastings K. Banda urging southern African states to "sit down together and negotiate." The following month Khama visited Zambia, which had been critical of Botswana's refusal to take a harder line on white Rhodesia's declaration of independence. He affirmed with Zambia's President Kenneth Kaunda a mutual intention to aid "genuine refugees" from southern African countries.

BOTSWANA • Information Highlights

ASIA
AFRICA

Area: 219,915 square miles (569,581 sq km).
Population: 593,000 (July 1, 1967 est.).
Chief Cities (1964 census): Gaberones, the capital, 3,849; Serowe, 34,182; Kanye, 34,045; Molepolole, 29,625.
Government: *President*—Sir Seretse Khama (took office Sept. 30, 1966). *Parliament*—National Assembly, 37 members (party seating, 1967: Democratic party, 28; People's party, 3; other, 6); (name of 2d house:) House of Chiefs, 12 members.
Religious Faiths: Tribal, about 95% of population; Roman Catholics, 2%.
Education: *Literacy rate* (1964), 34.5% of population aged 10 and over. *Total school enrollment* (1965)—67,756 (primary, 66,061; secondary, 1,325; teacher-training, 268; technical, 102).
Finance: *Revenues* (1964–65), $11,808,000; *expenditures,* (1966–67), $21,600,000; *public debt,* $5,036,000; *monetary unit,* rand (.7142 rand equal U. S.$1).
Gross National Product (1966): $35,500,000.
Crops: Corn, cotton, cowpeas, millet, peanuts, sorghum.
Minerals (metric tons, 1965): Manganese ore, 8,815; asbestos, 806.
Foreign Trade (1965 est.): *Exports,* $15,800,000 (chief exports, 1964: cattle carcasses; cattle; abattoir by-products; hides and skins); *imports,* $23,200,000 (chief imports, 1964: general merchandise; vehicles; corn. *Chief trading partners* (1966): South Africa (supplied 65% of imports); Rhodesia (supplied 27% of imports).
Transportation: *Roads* (1965), 5,016 miles (8,071 km); *motor vehicles* (1965), 3,096; *railways* (1964), 394 miles (634 km); *national airline,* Botswana National Airlines.

President Khama became the first African head of state to visit Lesotho since its independence. He traveled to that country in April to be installed as chancellor of the University of Botswana, Lesotho, and Swaziland.

Economic Dependency. Import figures for 1966, published in July 1967, emphasized Botswana's economic dependence on South Africa, from which 65% of its imports come, and Rhodesia to the north, accounting for 27% of its imports. The remaining 8% of its imports come mainly from South West Africa and Zambia. Ten percent of Botswana's export earnings derive from its migrant laborers, who work mainly in South Africa and South West Africa.

The discovery of some 33 million tons of copper and nickel deposits, announced on February 24, may help Botswana's future economic position.

Withdrawal of British Troops. British troops flown in nearly two years earlier to protect a $1.4 million radio station in Francistown, which relays news to Rhodesia where censorship is enforced, left Botswana on August 18. Security responsibility had earlier been transferred to the Botswana police, who will be aided by a British grant for police housing near the radio installation.

FRANKLIN PARKER
University of Oklahoma

BOYD, Alan S. See biographical sketch under UNITED STATES.

UPI

RESCUE WORKERS help to safety a victim of the massive landslides that destroyed shantytowns in the hills around Rio de Janeiro in February. The landslides, which were caused by heavy rains, left hundreds dead.

BRAZIL

A new presidential administration, functioning under a new federal constitution, was unable to effect any great improvement in the political or economic situation of Brazil in 1967. The prospects for a return to democracy remained dim as the new president, Artur da Costa e Silva, continued to run—though with less rigidity—the same type of military dictatorship as his predecessor, Humberto Castelo Branco. The new Brazilian constitution, adopted in January 1967, merely formalized this dictatorship. Opposition to the government was frustrated and disorganized. Although there was modest economic growth, the slight gains were largely canceled out by a population increase of more than 3%, and the economy remained under the threat of acute inflation.

Government. During the last months of his administration, before the March 15 inauguration of President-elect Costa e Silva, President Castelo Branco pushed through Congress several controversial laws, and a controversial new constitution that replaced Brazil's liberal constitution of 1946. The new charter, approved by Congress on January 22, greatly increased the powers of the executive at the expense both of Congress and of the states. Under its provisions, the president, who is elected indirectly, appoints state governors; initiates almost all matters of legislation; and may suspend individual political rights, decree laws, declare a state of siege, and seize property "when the national security and economy are threatened." The federal government collects most of the taxes and apportions the returns to the states.

Also on January 22, Congress approved Castelo Branco's press control law, which imposed extremely stiff penalties for the publication of "classified" information, with final judgment of what is "classified" left to the president and his cabinet. The law forbids the publication—even if true—of allegations of crime against the president, vice president, presidents of the Senate and the Chamber of Deputies, and members of the supreme court. The law also prohibits foreign news agencies from distributing Brazilian national news within Brazil. The passage of the press law generated violent opposition, both

BRAZIL • Information Highlights

AFRICA
SOUTH AMERICA

Area: 3,286,470 square miles (8,511,965 sq km).
Population: 84,679,000 (July 1, 1966 est.).
Chief Cities (1966 est.): Brasília, the capital, 330,000 (1965 est.); Rio de Janeiro, 3,909,000; São Paulo, 4,098,000; Recife, 1,010,000.
Government: *President*—Artur da Costa e Silva (took office March 15, 1967); *Parliament* (National Congress—Senate, 66 members (party seating, 1967: National Renovating Alliance (ARENA), 48; Brazilian Democratic Movement (MDB), 18); Chamber of Deputies, 409 members (party seating, 1967: ARENA 277, MDB, 132).
Religious Faiths: Roman Catholics, 93% of population.
Education: *Literacy rate* (1966 est.), 50% of pop. aged 10 and over. *Total school enrollment* (1964)—18,681,375 (primary, 9,623,748; secondary, 1,368,177; teacher-training, 175,384; technical, 349,150; higher, 142,386).
Finance (1966 est.): *Revenues,* $2,580,100,000; *expenditures,* $2,844,000,000; *monetary unit,* cruzeiro (2.715 new cruzeiros equal U. S.$1).
Gross National Product (1966): $23,600,000,000.
Economic Indexes: *Industrial manufacturing production* (1964), 248 (1953=100); *agricultural production* (1965), 135 (1956–57=100); *cost of living* (1966), 3,000 (1958=100).
Manufacturing (metric tons, 1966): Cement, 6,024,000; residual fuel oil (1965), 5,282,000; gasoline (1965), 4,310,000; sugar, 3,950,000; crude steel, 3,816,000; meat (1964), 2,065,000; lumber (1964), 5,531,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Cassava (1965–66), 24,993,000 (ranks 1st among world producers); maize (1965–66), 11,500,000 (world rank, 3d); bananas, 6,970,000 (world rank, 1st); coffee, 1,266,000 (world rank, 1st); rice (1965–66), 5,072,000; sweet potatoes (1965–66), 1,721,000; potatoes, 1,302,000; peanuts, 856,000.
Minerals (metric tons, 1965): Iron ore (1966), 12,912,000; crude petroleum (1966), 5,532,000; lime (1964), 1,438,028; salt, 1,123,000; manganese ore, 614,300; bauxite, 156,000; magnesite, 94,000; diamonds, 350,000 carats.
Foreign Trade (1966): *Exports,* $1,741,000,000 (chief exports, 1966: coffee, $764,000,000; cotton, $111,000,000; cocoa, $51,000,000). *Imports,* $1,496,000,000 (chief imports, 1965: crude petroleum, $156,440,000; grain, $135,900,000; organic chemicals, $59,270,000). *Chief trading partners* (1965): U. S. (took 38% of exports, supplied 29% of imports); Argentina (took 8% of exports, supplied 12% of imports).
Transportation: *Roads* (1965), 497,902 miles (801,124 km); *motor vehicles* (1966), 1,979,852 (automobiles, 1,140,810); *railways* (1965), 20,806 miles (33,477 km); *merchant vessels* (1966), 227 (1,158,000 gross registered tons); *national airlines,* Panair do Brasil; Serviços Aéreos Cruzeiro do Sul, S. A.; Varig, Vasp; *principal airports,* Belo Horizonte, Brasília, Recife, Rio de Janeiro, Salvador, São Paulo.
Communications: *Telephones* (1966): 1,320,003; *television stations* (1965), 41; *television sets* (1965), 2,300,000; *radios* (1964), 7,500,000; *newspapers* (1964), 227 (daily circulation, 2,606,000).

in Brazil and internationally, but the government, including President-elect Costa e Silva, remained unyielding.

A new Congress, composed of 66 senators and 409 deputies, took office on Jan. 31, 1967. All the deputies and 23 senators, together with thousands of state and local officials, had been elected on Nov. 15, 1966, in the first nationwide balloting since the military seized power in 1964. The government party, the National Renovating Alliance (ARENA), continued to hold a comfortable majority in both chambers over the opposition party, the Brazilian Democratic Movement (MDB).

Marshal Costa e Silva, former minister of war, was sworn in as president of Brazil on March 15 (he had been elected, by Congress, on Oct. 3, 1966). In his inaugural address he pledged that his administration would "humanize" Brazil's "Revolution of 1964," as the takeover by the military from the leftist government of João Goulart was called. Costa e Silva's program was slated, he declared, to improve the economic and social conditions of the country's vast rural area, with more attention paid to the health, education, and well-being of individuals.

With respect to foreign affairs, the president said that his government would remain pro-Western, would continue to play a part in international organizations, and would seek foreign economic markets and aid. The President reiterated these basic goals at the first meeting of his cabinet—in which military men held 9 of 18 posts. He declared that the Revolution of 1964 had succeeded in destroying communism, and now must work to guarantee equal rights and opportunities to all Brazilians.

The regime of President Costa e Silva was at first greeted enthusiastically, partly because of the great hostility aroused by the government of Castelo Branco. Later reactions were more reserved, and it was generally agreed, with relief in some directions, that the new president had done "nothing spectacular," either positively or negatively. It was held in the new president's favor, however, that he had made only sparing use of the enormous executive powers granted to him by the new constitution and the press control law. A case in point occurred after the death of former President Castelo Branco, in an airplane accident on July 18. Hélio Fernandes—publisher of the Rio de Janeiro *Tribuna da Imprensa*—who had been found guilty of making derogatory remarks concerning the deceased President, was sent to prison under the new law. However, after two months, he was freed.

Opposition. The greatest opposition to the government in 1967 came, not from the opposition party within the government, but from a group surrounding Carlos Lacerda, former governor of the state of Guanabara and former editor of Rio de Janeiro's *Tribuna da Imprensa*. Public opinion polls revealed Lacerda's rising popularity as a possible future presidential candidate.

Lacerda, a champion of capitalistic democracy, was at first a supporter of the coup of 1964, but later grew increasingly restive under Brazil's military rule. In 1967 he attempted to organize the opposition into a broad front that would include several of Brazil's ex-presidents. João Goulart, still in exile in Montevideo since his overthrow in 1964, was apparently favorable to the idea, as was Juscelino Kubitschek, who returned to Brazil on April 9 after a 3-year self-imposed exile. However, the vetoes of former president Jânio Quadros and the powerful Vargas family signaled the failure of Lacerda's efforts, which dwindled down to a battle in rhetoric. As a counteroffensive to the opposition, President Costa e Silva promised that his government would reject the road to dictatorship.

WIDE WORLD

BRAZIL'S PRESIDENT, Artur da Costa e Silva, applauds a fellow delegate to the Punta del Este Conference in April.

ARTUR DA COSTA E SILVA, retired army marshall and former minister of war, was inaugurated on March 15, 1967, as Brazil's 22d president, succeeding Humberto Castelo Branco. In his first policy speech, President Costa e Silva announced a program of "social humanism"—with increased benefits for the poor—and an independent, but pro-Western, foreign policy. The new President did not effect significant changes during his first nine months of office, but he seemed reluctant to use the methods of rigid presidential control adopted by his predecessor.

Costa e Silva was born on Oct. 3, 1902, in Taquarí, Rio Grande do Sul. During his 45-year army career he taught in Brazil's military schools and held various commands. He was a key figure in the military coup that ousted leftist President João Goulart in April 1964, and he served as minister of war under Castelo Branco. On Oct. 3, 1966, Costa e Silva was elected president by the National Congress.

Economy. After nearly three years in office, President Castelo Branco had not been able to control inflation, although the price rise in 1966 of 41.8% was an improvement over the 45.1% in 1965 and the high of 86% in 1964. In a final effort to check the inflation spiral, the retiring President, on February 13, issued a new cruzeiro worth 1,000 of the old cruzeiros. Also by presidential decree, a 23% devaluation of the cruzeiro brought the rate from 2.210 new cruzeiros (what would have been 2,210 old cruzeiros) to the dollar, to 2.715 to the dollar (or 2,715 of the old cruzeiros).

Brazil's recovery from acute inflation remained incomplete, for the 1967 cost of living increase was estimated at 40%, only a slight improvement over 1966. Inflation tends to discourage savings, and Brazilians prefer to buy durable goods, particularly cars, as a form of savings. Therefore, the streets of Rio and São Paulo are jammed with automobiles. However, despite such evidence of affluence in urban centers, Brazil still ranked third lowest in per capita income in South America, with an average annual income of $285 per person.

To counter some of these trends, President Costa e Silva initiated a struggle against poverty. His 3-year economic plan, announced on August 1, called for an increase in production of 6% per year, and an increase of $15 in per capita income in the first year. Price stabilization was vital to the plan.

There were some economic gains in 1967. Forecasts in October called for a 5% to 6% gain in national product. This was primarily due to a good harvest and greater industrial activity. Although foreign investments increased $1.1 billion, the administration aimed at strengthening the Brazilian-owned private sector, and also agriculture.

An encouraging aspect of the economic program was the evidence of some development in the poverty-stricken northeastern area where Sudene, the government's regional development agency, was able to lure new industry in 1967 with special tax inducements. In addition, federal, state, and foreign aid helped in the development of the area. Unfortunately the improvement was only relative, for the area still has a per capita annual income of $100.

The economic outlook was not helped by the announcement by the minister of finance on October 29 that the federal government's budgetary deficit was then running at 1.2 billion new cruzeiros ($480 million), about three times more than the 1967 budget had anticipated. Reduction of government expenses is not easy in Brazil, where about one half of the budget goes to the wages of a 700,000-man bureaucracy. There is also a history of difficulty in obtaining internal funds to support the government. Only 2.5 million Brazilians pay income taxes, with rates from 3% to 50%, after generous exemptions. Millions of middle- and upper-income citizens are undeterred by mild penalties and manage to evade these tax payments. A team of experts from the U. S. Internal Revenue Service was invited to Brazil to advise on improving tax-collection methods.

Education. Although President Costa e Silva pledged educational reform, remarkably little was done to improve Brazil's dismal educational statistics in 1967. Only 25% of the population aged 19 years and under was in school and one third of the 15–19 year-old group was illiterate. The national literacy rate was 50%, the third lowest in South America.

Foreign Affairs. On January 25, President-elect Costa e Silva began a one-week preinauguration visit to the United States. At a White House luncheon, and in apparent contrast to laws passed in Brazil just a few days earlier, he pledged common action with the United States "against those who are trying to violate and subvert justice, press, and freedom." On March 13 the United States and Brazil signed a convention for the avoidance of double taxation on incomes. The convention followed in broad outline the pattern of tax conventions already in effect between the United States and other countries.

IN BRASÍLIA, an underground cathedral designed by Oscar Niemeyer neared completion in 1967. Superstructure symbolizes Brazil's states holding up the Crown of Thorns.

UPI

Failing in its efforts to restrain Latin American countries, including Brazil, from making plans to buy jet bombers from European sources in the face of U. S. refusals, the United States withdrew its ban on the sale F-5 jets to Latin America.

U. S. aid to Brazil reached about $450 million in 1967, making Brazil second only to India in amounts of U. S. loans and grants received.

In early September, King Olav of Norway visited Brazil. He was the first Scandinavian monarch to pay a state visit to South America.

Extradition. The Brazilian supreme court agreed unanimously to extradite Franz Paul Stagl, a commandant of Nazi extermination camps in World War II, to West Germany, where he was to face trial for genocide and murder.

Natural Disasters. On January 22–24, record rains set off massive landslides in Rio, leaving over 890 persons dead. Another series of storms on February 17–20 killed about 230 persons.

J. Lloyd Mecham
University of Texas

BREWING INDUSTRY

For the sixth successive year, beer sales in the United States set a record in the fiscal year 1967. Sales totaled 107,301,357 barrels of 31 gallons each. This figure was 5,791,050 barrels higher than the previous record of 101,510,307 barrels established in the fiscal year 1966.

The brewing industry also set all-time high monthly sales records in the months of August, September, November, and December 1966, and in the first six months of the calendar year 1967. Brewers' sales from January to June 1967 climbed to a total of 53,458,231 barrels, an increase of 6% or 3,039,316 barrels over the record set during the corresponding period of 1966.

Nearly 8% of the population of the United States live in areas where the sale of beer and ale is prohibited. The results of the 1,170 local-option elections held in 1966 increased by 129,539 the number of persons living in areas where it is legal to sell these alcoholic beverages.

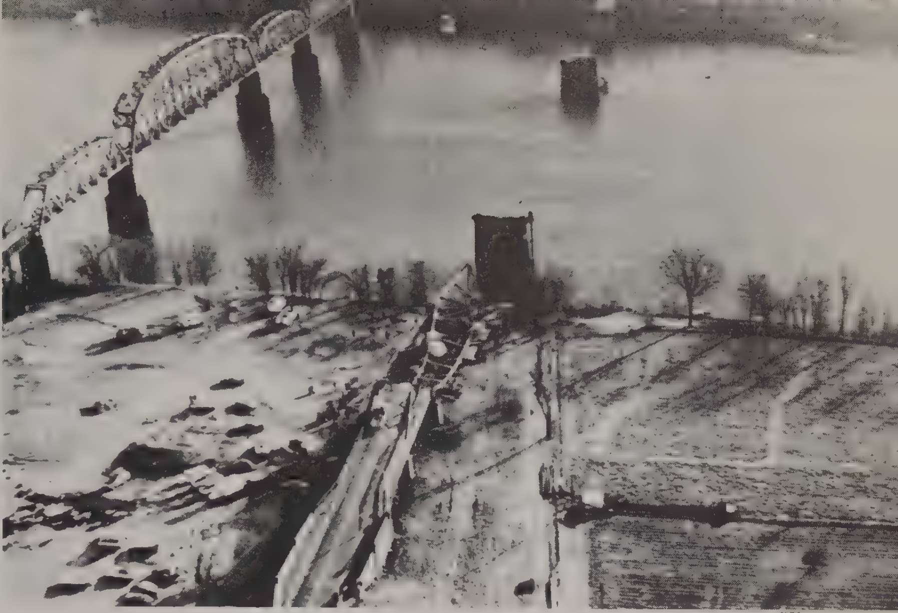
In the calendar year 1966, as in each of the previous 11 years, brewers paid more than $1 billion in state and federal taxes. They contributed more than $6 billion to the national economy. This figure included more than $225 million for agricultural products and $650 million for kegs, bottles, cans, containers, and related materials. It also included $520 million in direct salaries and wages, as well as substantial amounts in employee benefits.

Henry B. King
United States Brewers Association, Inc.

BREZHNEV, Leonid Ilyich. See biographical sketch under Union of Soviet Socialist Republics.

BRIDGE, Contract. See Sports.

A SUSPENSION BRIDGE between Point Pleasant, W. Va., and Kanauga, Ohio, collapsed into the Ohio River during the peak of rush-hour traffic on December 15. The disaster, which took a heavy toll in lives, left only the stumps of bridge towers remaining above water level.



UPI

BRIDGES

A spectacular failure of a 1,750-foot (533-meter) suspension bridge over the Ohio River marred the record of bridge safety in 1967. The 39-year-old span between Point Pleasant, W. Va., and Kanauga, Ohio, collapsed on December 15, plunging rush-hour automobile and truck traffic 80 feet down into the very cold waters of the Ohio River and killing at least 36 persons. The two-lane bridge, which had a span of 700 feet between its two towers, used steel eyebars for support instead of the usual steel cables. The cause of the collapse was being investigated. (See also OHIO; WEST VIRGINIA.)

Builders of bridges were active during the year as they completed new spans, worked to finish bridges then under construction, and made plans for new bridges. Bridge building in 1967 was paced by advances in suspension bridge construction and by the increasing use of the orthotropic deck bridge and the cable-stayed bridge.

Suspension Bridges. A new method for erecting the main cables of a suspension bridge is being used for the Newport Bridge in Rhode Island. The 1,600-foot (488-meter) main span of this suspension bridge has two 15.25-inch (38.8-cm) cables, each having 9,272 wires. Instead of being spun in place at the site, as has been done since John A. Roebling developed the spinning wheel more than 100 years ago, the parallel-wire cable strands are prefabricated in the shop, delivered to the site in coils, and then pulled over the bridge towers with a hauling rope. This method cuts the time for placing the cables from nine weeks to about five weeks. The $48 million Newport Bridge, scheduled for completion in 1968, spans the east passage of Narragansett Bay, connecting Jamestown and Newport, R. I. The bridge and its four-lane roadway will provide a direct traffic route between New York and Cape Cod, Mass.

A twin suspension span to the existing Delaware Memorial Bridge is being constructed across the Delaware River near Wilmington, Del. The two bridge cables for the 2,150-foot (655-meter) main span were spun in the conventional manner by using wire-spinning equipment at the bridge site. The $70 million bridge, scheduled for completion in 1968, has four lanes for westbound traffic; the older structure, built in 1951, will carry four lanes of eastbound traffic.

Another suspension bridge is under construction across the St. Lawrence River near Quebec city, Canada. The 3,414-foot (1,041-meter) structure, scheduled for completion in 1968, will have a 2,180-foot (664-meter) main span supported by two 24-inch (61-cm) cables, each having 10,600 wires. The bridge deck will provide six traffic lanes.

The longest bridge in South America—the $35 million Angostura Bridge over the Orinoco River in Venezuela—was opened to traffic in early 1967. The four-lane suspension bridge, located near Ciudad Bolívar, is 5,507 feet (1,679 meters) long and has a main span of 2,336 feet (712 meters). Its two 18.5-inch-diameter (47-cm) cables were spun in place.

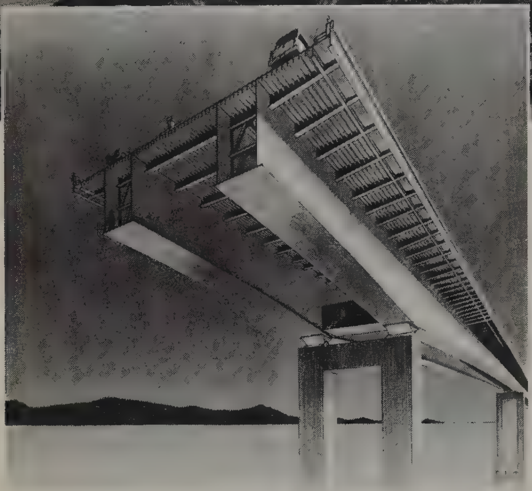
Orthotropic Deck Bridges. The orthotropic deck, a European innovation, was used for the first time in the United States in two bridges completed in 1967.

In the orthotropic design, steel plates, stiffened by longitudinal ribs, serve not only as the bridge deck but also as the top flange of the main girders. Thus, these steel plates carry the roadway and also serve as part of the support structure. With this design, less steel is needed in building the bridge than is needed with a conventional design, in which the deck plate and main girders are independent structural elements. The orthotropic deck plates are less than 1 inch (2.54 cm) thick. A protective coating of zinc paint, a thin coating of an epoxy asphalt, and a covering of bituminous concrete about 2 inches thick are applied to the deck plates to form the roadway surface.

The $70 million San Mateo-Hayward Bridge in California, a 6.75-mile (10.9-km) crossing over southern San Francisco Bay, has the longest orthotropic deck in the world. The part of the bridge that set this record is 5,542 feet (1,689 meters) long. Steel-box girders with an orthotropic steel-plate deck were used in this construction. This bridge also set another record: its 750-foot (229-meter) central span is the longest steel-box-girder span in the United States. The total length of the steel part of the bridge structure is 9,755 feet (2,975 meters); low concrete trestles form the remainder of the bridge. The bridge carries six lanes of traffic.

The $13 million Poplar Street Bridge, which crosses the Mississippi River at St. Louis, also uses

CALIFORNIA PHOTO SERVICE



AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ORTHOTROPIC DECK BRIDGE, the San Mateo-Hayward Bridge crossing southern San Francisco Bay, was completed in 1967. As the drawing at the left shows, the steel deck in the orthotropic design serves both to carry the roadway and to complete the support structure. The result is an unusually light, strong, and cleanly functional bridge construction.

steel-box girders with an orthotropic steel-plate deck. The bridge has five spans, totaling 2,165 feet (660 meters); the main span, which is the longest, is 600 feet (183 meters) long. It carries eight lanes of traffic.

Cable-Stayed Bridges. Several countries have been building cable-stayed (or stayed-girder) bridges for crossings shorter than those that require the use of a suspension bridge. In a suspension bridge, the deck loads are transferred to the main cables by vertical ties. In a cable-stayed bridge the deck is supported on diagonal cables that fan out from one or two towers located along the center line of the bridge. Where only a single tower is used, it may, if necessary, be located nearer to one shore than the other. In a recently completed Rhine River bridge near Karlsruhe, West Germany, for instance, a single steel tower supports the deck by means of three sets of steel cables strung diagonally from the tower down to the deck; the deck spans 575 feet (175 meters) on one side of the tower and 383 feet (117 meters) on the other side, for a total span of 958 feet (292 meters) between shore abutments.

A cable-stayed design is also being used for a bridge across the lower Yarra River at Melbourne, Australia. This 3-mile (4.8-km) crossing will have a 1,102.5-foot (336-meter) main span between two towers. Two sets of diagonal cables running from each tower will support both the deck of the box-girder main span and the two 472.5-foot (144-meter) flanking spans. This bridge is scheduled for completion in 1971.

Transporting Bridge Materials. A cable-stayed bridge is to be built over the Luangwa River in the republic of Zambia. The two-lane, 990-foot (302-meter) bridge will have a pair of two-column towers and cables for supporting the 730-foot (222-meter) main span and similar 130-foot (40-meter) flanking spans. The English contractor is prefabricating the bridge components—girders, pier sections, and prestressed cables—in England for shipment to Cape Town. This long sea journey—5,947 miles (9,570 km) from Southampton to Cape Town—will be followed by rail and road transport to the bridge site. There the components will be assembled for the new bridge.

Future Bridges. London Bridge, renowned both in song and verse, is deteriorating and soon will be replaced. The present bridge, erected over the Thames River in 1831, is the third bridge to have been built at that location. The bridge has five stone arches, its center span is 152 feet (46 meters) long, and it carries four lanes of traffic. The new bridge, scheduled to be completed in 1970, will be a prestressed concrete bridge and will carry six lanes of traffic.

Denmark plans to cross the 11-mile (17.7-km) Great Belt, the strait separating its two largest islands, Zealand and Fyn. One prize-winning entry in a design contest proposed a motor vehicle and railroad bridge to span the wide body of water. In this design, the upper deck of the bridge would carry six highway lanes and the lower deck would carry two railroad tracks.

WILLIAM H. QUIRK
"Engineering Construction World"

BRITISH COLUMBIA

British Columbia marked several milestones in 1967, including the completion of two major water storage dams. The Duncan Dam, first of three damsites under the Columbia River Treaty, was officially dedicated on August 17, about a year ahead of schedule. On September 12 the Portage Mountain Dam on the Peace River, representing an expenditure of $725 million, was named the W. A. C. Bennett Dam in honor of the premier of British Columbia. Late in 1967 a contract valued at $136 million was awarded for construction of the third Columbia River damsite, the Mica Dam, with completion scheduled for 1973.

Industrial Expansion. Major projects completed during the year were the $80 million Gold River pulp mill; expansion of the production plant at Powell River to a capacity of 1 million tons of newsprint annually; and construction of the $40 million property of Wesfrob Mines on the Queen Charlotte Islands, reportedly the largest iron ore mine in British Columbia. Among numerous manufacturing plants completed, two factories for bleaching chemicals and an oil refinery are now located at Prince George. A $42 million pulp mill is being built at Skookumchuk for completion in 1969. Of potential future importance was the 1967 drilling by Shell Canada, Ltd. off Vancouver Island.

Legislation. The legislature authorized establishment of a Home Acquisition Grant Fund of $25 million. Roughly 15,000 applications have been received, and payments total $7.5 million. A new Department of Travel Industry was established. Legislation was passed, subject to proclamation, for the creation of a British Columbia Harbours Board.

In 1967 the three-member Royal Commission on Automobile Insurance, appointed Jan. 25, 1966, continued its hearings. The report of the 1966 Royal Commission on the Invasion of Privacy was presented by Commissioner R. A. Sargent, a former county court justice. The report recommended control of "bugging" through new legislation to outlaw eavesdropping except by police or federal authorities empowered by writs of assistance.

Celebrations and Fairs. The opening of the British Columbia legislature in January 1967 was held in New Westminster instead of the capital city of Victoria. This commemorated the first session of the Legislative Council of the United Colony of British Columbia, which opened Jan. 24, 1867.

In May, the fourth British Columbia International Trade Fair featured the exhibits of 17 countries.

M. GLOVER
Director, B. C. Bureau of Economics and Statistics

BRITISH COLUMBIA • Information Highlights

Area: 366,255 square miles (948,601 sq km).
Population: 1,947,000 (June 1, 1967 est.).
Chief Cities (1966 Census): Victoria, the capital, 57,453; Vancouver, 410,375; New Westminster, 38,013; North Vancouver, 26,851; Prince George, 24,471; Kelowna, 17,006.
Government: *Chief Officers*—lt. gov., George R. Pearkes; premier, William A. C. Bennett (Social Credit party); prov. secy., Wesley D. Black (SC); atty. gen., Robert W. Bonner (SC); min. of educ., Leslie R. Peterson (SC); chief justice, Herbert William Davey. *Legislature*—Legislative Assembly (convened January 24–March 23, 1967), 55 seats (32 Social Credit; 16 New Democrat, 6 Liberal, 1 vacancy).
Education: *School enrollment*—public elementary and secondary (1966–67), 439,770; private schools (1965–66), 25,853; Indian (federal) schools (1965–66), 5,354: college and university (fall 1966), 26,364.
School expenditures: Local and provincial grade and vocational school expenditures (1964–65) $168,864,000; average teacher's salary, $6,168.
Public Finance (fiscal year 1967–68 est.): *Revenues*, $740,000,000 (sales and use taxes, $216,400,000; natural resource taxes, $137,925,000; income and inheritance taxes, $193,500,000). *Expenditures*, $739,380,900 (education, $193,319,200; health services and hospital insurance, $145,536,200; highways dept., $103,929,500).
Personal Income (1966 est.): total, $4,539,000,000.
Public Assistance (fiscal year 1967–68 est.): $72,559,800 (aged and handicapped, $15,079,000; social allowances, $37,000,000).
Manufacturing (1964): Value added by manufacture, $1,135,779,000. (wood industries, $324,630,000; primary metals, $76,743,000; paper and allied industries, $237,440,000; fabricated metals, $64,418,000; food and products, $167,462,000).
Agriculture (1966 est.): *Cash farm income*, $190,167,000 (livestock, $125,461,000; crops, $61,565,000; govt. payments, $1,115,000). *Chief crops* (cash receipts)—fruits, $25,449,000 (ranks 2d among provinces); vegetables, $11,190,000 (ranks 3d); potatoes, $5,164,000 (ranks 7th).
Mining (1966 est.): *Production value*—$315,846,393. *Chief minerals* (short tons)—copper, 57,962 (ranks 3d among the provinces by value); zinc, 140,227 (ranks 4th); lead, 98,795 (ranks 2d); molybdenum, 8,298 (ranks 1st); crude petroleum, 16,749,000 barrels (ranks 3d).
Forestry (1966): Lumber production, 7,444,000,000 board feet (ranks 1st among provinces); wood pulp, 3,809,465 tons (ranks 2d); basic paper, board, 1,679,059 tons (ranks 3d).
Fisheries (1966): *Commercial catch*, 559,226,000 pounds ($58,605,000). *Leading species*—salmon, 153,237,000 pounds ($32,551,000); halibut, 31,470,000 pounds ($11,282,000).
Transportation: *Roads* (1965), 34,917 miles (56,181 km); *motor vehicles* (1966), 818,112; *railroads* (1966), 4,323 track miles (6,956 km); *licensed airports* (1967), 44.
Communications (1967): *Telephones*, 807,959; *television stations*, 8; *radio stations*, 38; *daily newspapers*, 16.

BRITISH COMMONWEALTH. See COMMONWEALTH OF NATIONS.
BUDDHISM. See RELIGION—*Oriental Religions*.
BROWN, H. Rap. See biographical sketch under CIVIL RIGHTS.

BUDGET, U. S.

Net receipts of the United States government in the fiscal year ended June 30, 1967, amounted to $115,794,051,894, compared with $104,631,099,018 in the fiscal year ended June 30, 1966.

Net expenditures in fiscal 1967 were $125,731,987,115, as against $106,917,396,868 in the fiscal year 1966.

The 1967 budget deficit was $9,937,935,220, compared with $2,286,297,850 in 1966.

Public Debt. The total public debt and guaranteed obligations of the federal government on June 30, 1967, amounted to $326,733,133,869, compared with $320,368,635,070 at the end of fiscal 1966. Interest payments on the public debt amounted to $13,391,068,051 in fiscal 1967, compared with $12,013,862,666 in 1966.

The per capita debt in 1967 was $1,641.00, compared with $1,627.48 in 1966.

Consolidated Cash Budget. The flow of money between the public and the federal government is sometimes called the consolidated cash budget. To

U. S. CONSOLIDATED CASH BUDGET
Federal receipts from and payments to the public;
fiscal years 1966 and 1967
(in millions)

	1966	1967
Federal receipts from the public:		
Administrative budget receipts	$104,631	$115,794
Trust fund receipts	34,852	44,632
Deduct intragovernmental and other noncash transactions	5,100	6,895
Total federal receipts from the public	134,382	153,533
Federal payments to the public:		
Administrative budget expenditures	106,917	125,732
Trust fund expenditures	34,788	34,493
Deduct intragovernmental and other noncash transactions	4,114	4,929
Total federal payments to the public	137,592	155,296
Excess of cash receipts from or payments to (—) the public	−3,210	−1,763

Note—Figures are rounded to nearest million and will not necessarily add to totals.

derive the total receipts and payments, transactions of trust funds are consolidated with budget transactions. Transactions between them, such as interest paid by the Treasury Department to trust funds, are eliminated, along with some other noncash transactions. For example, interest that accrues on savings bonds is counted as a budget expenditure at the time of accrual, but because the interest is not paid in cash until the bond is redeemed, the consolidation eliminates the interest accruals and includes the interest paid on redeemed bonds. As a result, the figures in the consolidated cash budget are not the same as the figures for Treasury cash deposits and withdrawals as presented in the daily Treasury statement.

U. S. ADMINISTRATIVE BUDGET
(Fiscal Years 1966 and 1967, in millions)

Receipts (by source)	1966	1967
Individual income taxes	$ 55,407	$ 61,475
Corporation income taxes	30,073	33,977
Excise taxes	9,154	9,292
Miscellaneous receipts	5,797	6,860
All other receipts	4,829	4,865
Interfund transactions	−629	−675
Net receipts	104,631	115,794
Expenditures (by major agency)		
Legislative branch and the Judiciary	260	337
Executive Office of the President	26	28
Funds appropriated to the President:		
International financial institutions	...	−654
Office of Economic Opportunity	1,004	1,509
Peace Corps	...	111
Military assistance	945	850
Economic assistance	2,131	2,295
Public works acceleration	88	...
Other	109	−13
Agriculture:		
Commodity Credit Corporation	3,255	3,472
Other	2,732	2,345
Commerce	745	757
Defense:		
Military	54,363	67,570
Civil	1,309	1,343
Health, Education, and Welfare	7,652	10,801
Housing and Urban Development	772	520
Interior	1,325	1,510
Justice	371	407
Labor	500	506
Post Office	874	1,183
State	401	411
Transportation	...	1,468
Treasury:		
Interest	12,034	13,524
Other	1,444	1,015
Atomic Energy Commission	2,404	2,264
General Services Administration	607	679
National Aeronautics and Space Administration	5,933	5,426
Veterans Administration	5,069	6,195
Export-Import Bank of Washington	−385	−340
Small Business Administration	...	−239
United States Information Agency	...	184
Other independent agencies	704	859
District of Columbia	71	84
Allowances, undistributed	...	...
Interfund transactions	−629	−675
Total expenditures	106,917	125,732
Administrative budget deficit (−)	−2,286	−9,938

New Budget Approach. President Johnson announced the use of a "new budget approach" in his State of the Union message to Congress on Jan. 17, 1968. The budget figures he presented then, for the fiscal year 1969, included all of the government's spending for all purposes. The President explained:

"A presidential commission composed of distinguished Congressional fiscal leaders and other prominent Americans recommended this year that we adopt a new budget approach, and I am carrying out their recommendations in this year's budget. The budget, therefore, for the first time accurately covers all federal expenditures and all federal receipts, including for the first time in one budget $47 billion from the Social Security and Medicare, highway, and other trust funds."

TREASURY INFORMATION SERVICE

BUILDING AND CONSTRUCTION

With the alleviation of the mortgage money tightness of 1966, a steady rebound of housing construction took place in 1967. New construction activity as a whole reached a peak—as measured in dollars—of $77 billion. The 4% gain over the 1966 level of $74.4 billion was, however, only slightly more than the rise in construction costs during the year. Thus, for the second year in a row, the physical volume of construction output failed to equal the record set in 1965.

Aside from the still-incomplete recovery of residential housing, private construction did not lend much strength to the overall performance of the construction sector of the economy. The narrow increase of 1% in private outlays matched the same uncertain gain of 1966. The value of new construction put-in-place for new housing rose by 5%, while nonresidential buildings outlays declined by 3%.

Despite the reduction of funds allotted for federally owned construction and despite high money rates that deterred the starting of many state and local projects, total public construction in 1967 repeated its 8% gain of 1966. In fact, public construction accounted for 1.9 billion out of the $2.6 billion increase in all new construction.

Labor shortages in skilled trades helped push labor costs up. Unemployment continued to stay near the lowest levels in recent years for the contract construction labor force as a group. Because of the ample capacity of building materials industries, price pressures were not as severe as in 1966.

Private Construction. The outstanding event in private construction in 1967 was the sharp reversal that made more credit available in the residential mortgage market. A record rate of inflow of savings funds into lending institutions helped lift new housing starts from a low point at the beginning of 1967, when private starts were at an annual rate of about 1,100,000 units. By the end of 1967 starts were running at the seasonally adjusted annual rate of over 1,400,000 units. Private housing starts for the year as a whole were almost 130,000 units above the depressed levels of 1966. They totaled about 1,300,000 units but were still about 300,000 below the 1963 level.

Although dollar spending for private residential buildings rose a nominal 3% in 1967, nonresidential buildings declined in the face of tight money and the temporary denial of accelerated depreciation tax allowances. Thus, virtually all types of buildings declined, with the notable exception of educational buildings.

Especially hard hit was the industrial buildings category, which showed an 8% decline in spending in 1967 after a 31% rise in 1966. Public utilities, which was the strongest construction group in 1966 with a 17% increase, had a rate of gain about half as great in 1967, rising by $500 million.

Public Construction. The strong uptrend of public construction expenditures continued in 1967 as total outlays reached a new peak of $25.9 billion. The overall 8% increase involved good gains for most of the important categories.

The upswing continued in new construction expenditures for state-owned and locally owned facilities in 1967. A decline in spending for federally owned construction was more than offset by large dollar increases in the outlays for the educational and highway categories. Educational outlays rose

THE NEW YORK TIMES

THE ARENA of the new Madison Square Garden in New York City, with a seating capacity of 20,000, is shown nearly ready for its February 1968 opening.

by over $600,000,000 to $5,950,000,000, a 12% gain over 1966. This followed a 25% rise in 1966. Similarly, a 6% rate of gain in 1967 produced an increase of $500 million in spending for new highways. Education and highways accounted for about 60% of the dollar increases in public construction.

Geographic Trends. Private housing construction remained at a relatively low level in all regions in 1967. Building permits showed mixed trends in other types of private construction. Hospital facilities gained in each area except the West.

Office buildings showed strength in the Northeast and West. The South stood out as the only region in which a substantial gain was experienced for all nonresidential buildings.

Over one third of the states showed declines in private construction. This trend involved the three largest states—California, Illinois, and New York. A few states showed large increases in permit valuations. These included Nebraska, North Carolina, Georgia, Minnesota, Ohio, and Washington, each with 1967 gains of 20% or more.

Costs and Prices. The upward pace of costs for construction as a whole was about the same as in 1966, with a 4.5% rise, although there was a halt in the swift ascent of highway costs.

Materials prices stabilized in 1967 after a more-than-normal rise in 1966. The adequate production capacity of industry and the drop in the physical output of private construction contributed to the stability. Gypsum products fell in 1967 to the lowest point since 1961.

Employment and Earnings. Employment in 1967 was about level with 1966 as about 3.3 million persons engaged in contract construction. Even with some local shortages reported, employment levels fell in trades heavily involved in housing activity, such as masonry, plastering, painting, and paperhanging. Average hourly earnings continued to increase at about the same rate (5%) as in recent years. Building and construction employees had weekly earnings averaging 5% higher than in 1966. An exception, however, occurred in highway construction, which showed only a 2% rise in weekly earnings.

Aaron Sabghir

Chief Economist, Building Materials and Construction Industries Division

Business and Defense Services Administration

MADISON SQUARE GARDEN CENTER in New York, designed by Charles Luckman Associates, includes a circular sports center (*foreground*) and an office building (*rear*).

BETHLEHEM STEEL CORPORATION

BULGARIA

With the first year of the fifth 5-year plan completed, Bulgaria's new economic policy showed mixed returns in 1967. The liberalization of Bulgarian political life continued, but very slowly. Diplomatic affairs were marked by commercial treaties with Communist and Western countries.

Internal Affairs. Despite rumors in late 1966 that Communist party leader Todor Zhivkov would adopt the Russian system of collective leadership, he retained for himself both the premiership and the office of first secretary of the Bulgarian Communist party. At a party congress in November 1966 several of Zhivkov's close supporters were promoted to the central committee and the politburo. Stanko Todorov was replaced as deputy premier by Lachezar Avramov. Ivan Popov and Peko Takov were added to the council of ministers; Popov became a full member of the politburo and Takov a candidate member.

The politburo was enlarged from 8 to 11 members to include Todor Pavlov, Tsola Dragoicheva, and Pencho Kubadinsky. In the secretariat of the central committee, Nacho Papazov and the party's chief ideologist, Mitko Grigorov, failed to gain reelection. The central committee itself was increased from 101 to 137 members.

Indicative of continued conflict in the military establishment was the selection of a new first deputy minister of national defense. Col. Gen. Atanas Semerdzhiev, chief of the army general staff, replaced Ivan Vrachev.

The liberalization of Bulgarian life continued. There was some hope that the National Assembly could become a more effective governing body. In June 1967 a question was posed to the government in the National Assembly about state lands. Although it was a minor issue, Premier Zhivkov suggested that the Assembly not only had the right to raise such questions to ministers, but that if it was not satisfied with the answer, it might transfer the question into a formal query or challenge.

A more liberal code of laws was prepared by the ministry of justice. Although it stipulated harsher punishments for important crimes, such as murder and treason, lesser crimes were to be punished more lightly.

Economy. As reported in the official daily newspaper *Rabotnichesko Delo*, the new economic policy revealed significant gains for the Bulgarian economy in 1967. Industrial production for the first half of 1967 was 14.8% over that of 1966. The largest increases were made in textiles, food processing, electric power, and metallurgy. Per capita productivity of workers rose 8.5%, while national income was up 11%. Internal trade rose 11.1% and foreign trade 11.7%. Exports increased by 15.9%, of which 28.4% was mechanized equipment.

There were also evident failures in the new economic system. A Bulgarian worker still produced 50% less than his Soviet counterpart. There was a shortage of technical and scientific experts. Housing was scarce even in Sofia, the capital. Consumer goods were plentiful but expensive, and agricultural methods remained backward.

Aware of these problems, Premier Zhivkov criticized party officials for interfering with industrial management, and he established a permanent commission to guide the economic program. Soviet-born Grisha Filipov, a strong advocate of economic reform, became its head. All ministries, industries, and other institutions were ordered to begin technical training courses for their employees.

Tourists played a major role in economic plans. Bulgaria expected about 2 million visitors in 1967. In contrast to former years, private citizens were allowed to rent accommodations to tourists.

Trade. Although over one half of all its trade was with the Soviet Union, Bulgaria negotiated commercial treaties with both non-Communist and Communist nations, including Italy, France, Japan, Canada, Great Britain, West Germany, East Germany, Rumania, Yugoslavia, and others. Of particular importance were a series of agreements providing for joint enterprises to be built in Bulgaria by foreigners. At Plovdiv a new Bulgar-Renault auto assembly plant was opened. Production was to be geared to 50,000 cars annually by 1970. Plans have been made to assemble Italian Fiats and Russian Moskvich 48's in Bulgarian factories.

Foreign Affairs. Bulgaria sought better relations

BULGARIA • Information Highlights

EUROPE
AFRICA

Area: 42,823 square miles (110,912 sq km).
Population: 8,258,000 (July 1, 1966, est.).
Chief Cities (1964 est.): Sofia, the capital, 739,000; Plovdiv, 203,800; Varna, 172,700; Ruse, 123,100.
Government: *President of the Presidium*—Georgi Traikov (took office April 23, 1964); *Premier and Communist party First Secretary*—Todor Zhivkov (took office Nov. 19, 1962). *Parliament*—National Assembly, 416 members (all belonging to the Fatherland Front).
Religious Faiths: Eastern Orthodox, 80% of population; Muslims, 10%; Roman Catholics, 0.7%; others, 9.3%.
Education: *Literacy rate* (1956), 85% of population aged 15 and over. *Total school enrollment* (1964)—1,556,067 (primary, 1,154,670; secondary, 119,109; teacher-training, 80; technical, 179,567; higher, 102,641).
Finance: (1965 est.): *Revenues*, $2,677,000,000; *expenditures*, $2,668,000,000; *monetary unit*, lev (1.17 leva equal U. S.$1).
Net Material Product: (1965): $5,671,000,000.
Economic Indexes: *Industrial production* (1965), 115 (1958=100); *agricultural production* (1963), 178.3 (1932–38=100); *cost of living* (1964), 105 (1958=100).
Manufacturing: (metric tons, 1965): Cement (1966), 2,856,000; wheat flour, 1,589,000; crude steel (1966), 699,600.
Crops: (metric tons, 1966): Wheat, 3,300,000; sugar beets, 1,819,000; grapes (1965), 1,334,000.
Minerals (metric tons, 1965): Iron ore, 1,801,000; lime, 840,000; bituminous coal (1964), 586,000; petroleum, 229,000.
Foreign Trade (1966): *Exports*, $1,176,000,000 (chief exports, 1965: foodstuffs, $355,000,000; machinery and equipment, $291,281,000; consumer goods, $159,914,000; organic raw materials, $159,572,000); *imports*, $1,474,000,000 (chief imports, 1965: machinery and equipment, $513,589,000; fuels, minerals, and metals, $313,931,000; organic raw materials, $119,230,000). *Chief trading partner* (1965): USSR (took 54% of exports, supplied 52% of imports).
Transportation: *Roads* (1964), 17,740 miles (28,550 km); *motor vehicles* (1965), 34,700 (automobiles, 9,800); *railways* (1965), 2,383 miles (3,834 km); *merchant vessels* (1966), 67 (417,000 gross registered tons); *national airline*, TABSO.
Communications: *Telephones* (1966): 279,200; *tv stations* (1965), 1; *tv sets* (1965), 185,000; *radios* (1965), 2,055,000; *newspapers* (1965), 11 (circ., 1,408,000).

BURMESE crowds at Moulmein demonstrate against Communist China by burning an effigy of Mao Tse-tung on July 13, 1967.

WIDE WORLD

with the West in 1967; however the Israeli-Arab crisis, the Vietnam War, and the German question made progress difficult.

In October 1966, President Johnson announced a policy of closer ties with eastern Europe. Credit and trade restrictions on Bulgaria were eased, and the U. S. legation in Sofia was raised to embassy level. However, the Israeli-Arab war in June 1967 and the continued involvement of the United States in Vietnam largely dissipated any goodwill earned by these earlier moves.

While trade increased with West Germany, relations remained strained. Bulgaria refused to follow the Rumanian precedent of recognizing the Bonn government. Instead, Sofia offered to recognize East and West Germany as equals, if Western nations would do the same. Bulgaria concluded 20-year treaties of friendship with Poland, and East Germany, countries unfriendly to West Germany.

The Macedonian problem continued to disturb Bulgarian-Yugoslav relations. Premier Zhivkov has declared himself an advocate of South Slav cooperation, but his government refuses to recognize the Macedonians as a separate, non-Bulgar people.

Bulgaria continued to support the Soviet Union in the Sino-Soviet dispute, and on May 12 signed a pact of friendship, cooperation, and mutual aid with the USSR. Bulgarian delegates attended the European Communist party conference at Karlovy Vary, Czechoslovakia, on April 24–26, to discuss major international questions.

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BURMA

To Burma's worsening problems of insurgency and economic dislocation was added a major complicating factor in 1967: abandonment by Communist China of its previously proclaimed policy of noninterference in Burmese affairs. It appeared likely that Peking would exploit Burma's domestic difficulties. The Burmese government's release of nearly 700 non-Communist political prisoners late in the year suggested impending moves to bolster internal unity in the face of this foreign threat.

Political Affairs. At the year's end the government controlled no more than two thirds of the country by day—probably less by night. Insurrectionists in the field numbered approximately 15,000, compared with the 165,000-man armed forces. The Karens remained the largest ethnic group in insurrection, about 5,000 members of this minority opposing the government by force. There appeared to be an increase in the strength of the Communist insurgents, who may have grown in number from 2,000 to nearly 3,000 during the year.

U Win Maung, who had held the largely ceremonial post of president of Burma when Gen. Ne Win seized power in 1962 (and who is himself a Karen), was among the 686 political prisoners released by the government in October. Brigadier Aung Gyi, a former right-hand man of Ne Win's, had been freed from detention earlier and reportedly was being asked to join the government. Former Premier U Nu, leader of the government deposed by Ne Win, and who was released from prison in 1966, was touring the country—apparently for the purpose of organizing an opposition political party.

Foreign Affairs. The clash with Communist China was precipitated by a Burmese ban on the wearing of various political insignia, including Maoist emblems. Chinese students in Rangoon, encouraged by Chinese diplomatic personnel, defied the edict, provoking anti-Chinese rioting in late June. At least 50 persons were killed, mostly Chinese. China immediately denounced the Burmese government and pledged open support to the insurgent Burmese Communist party. Anti-Chinese demonstrations spread throughout Burma following China's attacks on the government. In October, China announced discontinuance of its aid program. This program, financed by a loan of $84 million negotiated in 1961, involved nearly 400 Chinese technicians.

Rangoon was the first stop in September of Japanese Premier Eisaku Sato's five-nation Southeast Asian tour. Sato and Ne Win expressed hopes of greater efforts to bring peace to Vietnam.

Economy. Efforts in late 1966 to modify the earlier complete socialization of the economy failed to produce any appreciable moderating effects on the country's worsening economic situation. Burma, which exported 3 million tons of rice annually before World War II and 2 million tons as recently as the late 1950's, shipped abroad only about 700,000 tons in 1967.

Rice was rationed, but frequently it was not even available on the black market. There were demonstrations in Prome, Pegu, and elsewhere to stop the shipment of rice from these localities to other parts

BURMA • Information Highlights

Area: 261,789 square miles (678,033 sq km).
Population: 25,246,000 (July 1 ,1966, est.).
Chief Cities: (1964 est.): Rangoon, the capital, 1,530,434; Mandalay, 322,000; Moulmein, 190,000.
Government: *Chairman of the Revolutionary Council*—Gen. Ne Win (assumed power March 2, 1962); *Revolutionary Council*, 13 members.
Religious Faiths: Buddhists, 85% of population; Roman Catholics, 1%; others, 14%.
Education: *Literacy rate* (1965), over 60% of population. *Total school enrollment* (1964)—2,411,264 (primary, 1,887,490; secondary, 497,275; teacher-training, 3,138; technical, 2,846; higher, 20,515).
Finance (1967 est.): *Revenues*, $492,408,000; *expenditures*, $351,141,000; *monetary unit*, kyat (4.7619 kyats equal U.S. $1).
Gross National Product (1964): $1,624,000,000.
National Income (1964): $1,363,000,000; average annual income per person, $56.
Economic Indexes: *agricultural production* (1965), 131 (1956–57=100); *cost of living* (1963), 99 (1958=100).
Manufacturing (metric tons, 1965): Gasoline, 154,000; cement, 120,000; sugar, 75,000; cotton yarn (1964), 5,000.
Crops (metric tons, 1966): Rice, 7,350,000; peanuts, 318,000; sesame, 92,500; cottonseed, 59,000; chick peas, 46,000; millet (1965), 36,000; tobacco, 32,300.
Minerals (metric tons, 1965): Crude petroleum, 542,000; salt, 174,000; lead concentrate, 30,000; zinc, 13,600; coal, 20,000; tin, 894; nickel, 200; antimony ore, 50; silver, 1,120,000 troy ounces.
Foreign Trade (1966): *Exports*, $192,000,000 (chief exports, 1964: rice, $152,400,000; oilseed cake and meal, $12,400,000; raw cotton, $5,560,000; silver, $1,820,000); *imports*, $157,000,000 (chief imports, 1964: machinery and transport equipment, $49,444,000; animal and vegetable oils and fats, $45,313,000; woven cotton fabrics, $19,187,000). *Chief trading partners* (1964): Japan (took 7% of exports, supplied 18% of imports); Communist China (took 7% of exports, supplied 12% of imports).
Transportation: *Roads* (1965), 16,000 miles (25,744 km); *motor vehicles* (1965), 57,300 (automobiles, 27,700); *railways* (1965), 1,925 miles (3,097 km); *merchant vessels* (1966), 8 (45,000 gross registered tons); *national airline*, Union de Burma Airways; *principal airport*, Rangoon.
Communications: *Telephones* (1966): 24,000; *radios* (1965), 330,000; *newspapers* (1964), 25.

of Burma. Widespread substitutions of bread and noodles for rice led to shortages of these food products, too, in the major urban areas. Cooking oil, sugar, and canned milk— imported because Burma has no dairy industry— were also in very short supply. Prices on the increasingly overt black market were three to five times greater than those in the nearly bare-shelf government-run "people's shops."

The budget for fiscal 1967–68, announced September 24, provided for expenditures of $1,930,900,000 and revenues of $1,942,900,000. Increased taxes were imposed on various items, including gasoline and diesel oil, which had not been taxed previously. Foreign assistance, including loans, was estimated at $42.8 million.

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BURUNDI

President Michel Micombero, who seized power in a bloodless coup on Nov. 28, 1966, took measures to consolidate his power in 1967. In foreign affairs, relations were improved with Rwanda and the Congo (Kinshasa) although as a result of rebel threats against Burundi there were border tensions during the summer and early fall.

Internal Affairs. President Micombero reshuffled his cabinet on March 13, assuming responsibility for foreign affairs. He relieved army chief Maj. Albert Shibura of his command on May 8, when Shibura and others in the army and judiciary were arrested for allegedly plotting to "make use of the republic to their advantage." In early February, all student and youth groups were consolidated into one organization known as the Jeunesse Révolutionaire Rwagasore (JRR).

Foreign Affairs. In an effort to ease relations between Burundi and Rwanda, President Micombero and Rwanda's President Grégoire Kayibanda met at a conference presided over by Congo President Joseph Mobutu in March. They agreed to establish a political commission to consider ways in which the Tutsi refugees in Burundi could be disarmed and politically neutralized.

Relations with the Congo were tested by the activities of rebel mercenaries and soldiers in Bukavu, just across the border from Bujumbura, capital of Burundi. The mercenaries threatened to cut off Burundi's electric supply, which it receives from a generator in Bukavu, if the Burundi government acted in an "unfriendly" fashion.

Economic Affairs. In order to ease Burundi's currency problems, Belgium agreed in March to assume responsibility for the 1967 payment on Burundi's loan from the World Bank.

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BURUNDI • Information Highlights

Area: 10,747 square miles (27,834 sq km).
Population: 3,274,000 (July 1, 1966, est.).
Chief City (1965 est.): Bujumbura, the capital, 75,000.
Government: *President*—Michel Micombero (took office Nov. 28, 1966); *Parliament*—(dissolved October 1965).
Religious Faiths: Roman Catholics, 55% of population; others, 45%.
Education: *Total school enrollment* (1964)—144,679 (primary, 139,015; secondary, 2,304; teacher-training, 1,781; technical, 1,419; higher, 160).
Finance (1966 est.): *Revenues*, $15,500,000; *expenditures*, $18,600,000; *monetary unit*, Burundi franc (87.50 francs equal U.S.$1).
Gross National Product (1965): $150,000,000.
Crops (metric tons, 1966–67): Green coffee, 15,600.
Minerals: Limestone; tin ore.
Foreign Trade (1965): *Exports*, $14,000,000 (chief exports: coffee, cotton, animal hides); *imports*, $18,500,000 (chief imports: textiles, transport equipment, food products, petroleum, lubricants, metal products). *Chief trading partners* (1965): U.S. (took 77% of exports, supplied 8% of imports); Belgium (took 13% of exports, supplied 29% of imports).
Transportation: *Roads* (1966), 3,700 miles (5,953 km); *motor vehicles*, 4,112; *merchant vessels* (1966), 2 (15,000 tons.)

BUSINESS. See Economic Review.

CABINET, U. S. For a listing and biographies of cabinet officials, see UNITED STATES.

CALIFORNIA

California's new Republican governor, Ronald Reagan, dominated events of the year 1967. His influence was reflected in the regular legislative session, government economy drives, new taxes, and changes at the University of California.

The Governor. That Governor Reagan was determined to cut costs of government was evident immediately after he took office on January 2. A 10% across-the-board reduction of budgets was instituted, several thousand state employees (including some 3,000 in mental health programs) were released, and sharp cuts were made in medical benefits. While consistently denying presidential ambitions, Governor Reagan became increasingly active on the national speaking circuit as the year moved on. (See also REAGAN.)

Budget and Taxes. The final budget for 1967, totaling a record $5.09 billion, required tax increases of over $900 million. Many new taxes were imposed, but the most widely felt were a 1-cent increase (from 4 cents to 5 cents) in the sales tax, higher liquor and cigarette taxes, and an increase in the income tax.

University of California. Governor Reagan conducted a notable battle with the 9-campus University of California system. His proposals to cut the budget severely and to impose tuition added to the turmoil in university circles caused by the student unrest of the past two years. The governor had to be satisfied with modest budget cuts, and his tuition proposal was rejected in favor of increased fees. Clark Kerr, president of the university, was dismissed by the Board of Regents on January 20 and was replaced in September by Charles J. Hitch, a former vice president of the university. The budget squeeze was also felt throughout the state college system. Student demonstrations, mostly related to the Vietnam War, continued sporadically but without the intensity of previous years.

Legislation. During its regular session the legislature was preoccupied by budgetary considerations, but it did pass a liberalized therapeutic abortion act, a bill to prohibit the carrying of loaded weapons within city limits, and a measure restricting electronic eavesdropping to the state attorney general and full-time law enforcement officials acting under proper authority. On May 2, a band of 26 armed young Negroes invaded the chamber of the Assembly (lower house) to protest the weapons bill.

During the year the state had its first experience with the "implied consent" law, passed in 1966, under which a motorist who refuses to take a blood, breath, or urine test when suspected of drunken driving may lose his license for six months. During the first two months of its application, 1,235 persons refused to take the tests, and more than 1,000 of these had their licenses suspended.

On May 22 the U. S. Supreme Court invalidated Proposition 14, an initiative measure approved by the voters in 1964 that would have abolished all fair housing legislation and prohibited such legislation in the future.

Congressional Redistricting. Under state supreme court orders either to redistrict the state's 38 congressional districts by Dec. 7, 1967, or to accept redistricting by the court, the legislature met in special session on November 6. Before the end of the month it produced a plan designed to correct the worst imbalances while providing maximum protection to incumbents and thus to California's representative seniority in Congress. The plan was accepted by the court in December.

Special Elections. Mrs. Shirley Temple Black, former motion picture child star, ran second to fellow Republican Paul N. McCloskey, Jr., in a special election held on November 14 in the 11th congressional district to fill a vacancy caused by the death of Republican Rep. J. Arthur Younger. Because McCloskey (one of 11 candidates) did not win a majority of the votes, he faced the leading Democratic contender, Roy Archibald, in a runoff election on December 12. McCloskey won easily.

Republicans rejoiced over victory in a special election on August 15 to fill a state Senate vacancy caused by the death of Democratic State Sen. J. Eugene McAteer. The victory of Municipal Judge Milton Marks, a Republican of San Francisco, gave the Republicans and Democrats a tie in the Senate.

Executions. The 4-year moratorium imposed by former Gov. Edmund G. Brown on gas-chamber executions came to an end in April 1967, and one execution was carried out on April 12. The resumption of executions intensified the dispute revolving around continuing efforts to abolish the death penalty, but the legislature has consistently refused to adopt such

CALIFORNIA • Information Highlights

Area: 158,693 square miles (411,015 sq km).

Population: 19,163,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Sacramento, the capital, 265,000; Los Angeles, 2,738,000; San Francisco, 756,900; San Diego, 636,000; Oakland, 378,000; Long Beach, 368,000.

Government: *Chief Officers*—governor, Ronald Reagan (Republican); lt. gov., Robert H. Finch (R); secy. of state, Frank M. Jordan (R); atty. gen., Thomas C. Lynch (Democrat); treas., Ivy Baker Priest; supt. of pub. instr., Max Rafferty; chief justice, Roger J. Traynor. *Legislature* (convened Jan. 2, 1967)—Senate, 40 members (20 Republicans, 20 Democrats); Assembly, 80 members (38 R, 42 D).

Education: *School enrollment* (1965–66)—public elementary, 3,064,000 pupils (93,800 teachers); public secondary, 1,636,000 pupils (62,200 teachers); nonpublic schools, 441,300 pupils (15,510 teachers); higher (fall 1965), 866,746 students. *Public school expenditures* (1965–66)—$2,475,000,000 ($603 per pupil); average teacher's salary, $8,150.

Public Finance (fiscal year 1967): *Revenues*, $3,637,513,569 (3% sales tax, $1,053,249,331; motor fuel tax, $548,286,749; federal funds, $2,797,640). *Expenditures*, $4,128,678,354 (education, $1,648,926,723; health & welfare, $922,601,158; highways, $684,799,344). *Debt*, $4,265,915,000.

Personal Income (1966): $65,002,000,000; average annual income per person, $3,457.

Public Assistance (fiscal 1966): $1,024,015,726 to 1,085,324 cases (aged, $402,767,740; dependent children, $369,347,458).

Labor Force (employed persons, July 1967): *Agricultural*, 302,900; *nonagricultural* (wage and salary earners), 6,337,100 (24.8% manufacturing, 21.7% trade, 19.6% government). *Unemployed persons* (1966 annual average)—374,000.

Manufacturing (1965): Value added by manufacture, $18,876,132,000 (trans. equip., $3,000,342,000; elec. mach., $2,178,960,000; nonelec. mach., $1,330,076,000; fabricated metals, $1,189,023,000; food and products, $2,649,985,000).

Agriculture (1966): *Cash farm income*, $4,051,929,000 (livestock, $1,556,763,000; crops, $2,391,285,000; govt. payments, $103,881,000). *Chief crops* (tons)—sugar beets, 5,265,000 (rank, 1st among the states); grapes, 3,400,000 (rank, 1st); citrus fruit, 1,963,600 (rank, 2d); barley, 1,613,232 (rank, 2d); peaches, 1,104,032 (rank, 1st).

Mining (1966): *Production value*, $1,708,606,000 (ranks 3d among the states). *Chief minerals*—gypsum, 1,423,000 tons; crude petroleum, 344,560,000 barrels.

Fisheries (1966): *Commercial catch*, 458,440,000 pounds ($55,150,000). *Leading species*—yellowfin tuna, 132,595,000 pounds ($23,689,000); skipjack tuna, 51,089,000 pounds ($6,761,000); mackerel, 40,862,000 pounds ($1,424,000).

Transportation: *Roads* (1967), 171,007 miles (275,150 km); *motor vehicles* (1966), 10,496,928; *railroads* (1965), 29,240 track miles (47,056 km); *airports* (1967), 35.

Communications: (1966): *Telephones*, 10,595,800; *television stations*, 36; *radio stations*, 344; *newspapers*, 128 (daily circulation, Sept. 1965, 5,457,268).

a measure. Early in July a U. S. district court judge ordered a temporary stay of execution for all 58 men then in death row, and on July 10 a federal appeals court refused to set the stay aside. On November 14 the state supreme court stayed all executions pending hearings in death penalty cases early in 1968.

Other Events. Civil disturbances occurred during the year in San Francisco, Los Angeles, and several other cities, but no widespread damage or injuries resulted. The city of Long Beach attracted wide attention with its successful bid to obtain the Cunard liner *Queen Mary* for use as a maritime museum and hotel. California continued to attract new residents in 1967 but at a slightly diminished rate.

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CAMBODIA

Cambodia's relations with the United States, South Vietnam, Thailand, Australia, Japan, and Laos deteriorated in 1967, and its political stability was slightly shaken.

JACQUELINE KENNEDY, welcomed by Prince Norodom Sihanouk, arrives in Phnom Penh in November. The friendly visit contrasted with strained U.S.-Cambodian relations.

UPI

CAMBODIA • Information Highlights

Area: 69,898 square miles (181,035 sq km).
Population: 6,250,000 (March 1966 est.).
Chief Cities (1962 prelim. census): Phnom Penh, the capital, 403,500; Battambang, 38,846; Kampong Cham, 28,534; Pursat, 14,325.
Government: Queen—Sisowath Kossamak (acceded 1960); *Chief of State*—Prince Norodom Sihanouk (took office June 20, 1960); *Premier*—Son Sann (took office May 2, 1967). *Parliament*—National Assembly, 82 members (all belonging to Popular Socialist Community); Council of the Kingdom 2d house), 24 members.
Religious Faiths: Buddhists, 90% of population; Roman Catholics, 0.9%; others, 9.1%.
Education: *Literacy rate* (1958), 31% of population aged 15 and over. *Total school enrollment* (1964)—785,462 (primary, 691,131; secondary, 81,619; teacher-training, 1,949; technical, 6,000; higher, 4,763).
Finance (1966 est.): *Revenues,* $200,000,000; *expenditures,* $200,000,000; *monetary unit,* riel (35 riels equal U.S.$1).
Gross National Product (1965): $830,000,000.
National Income (1963): $611,000,000; average annual income per person, $104.
Cost of Living Index (1965): 138 (1958=100).
Manufacturing: Cement (1964), 10,000 metric tons; lumber (1965), 160,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Rice, 2,283,000; maize, 164,000; natural rubber, 51,300.
Minerals (metric tons 1964): Phosphate rock, 150,000; salt, 60,000; gold (1965), 4,500 troy ounces.
Foreign Trade (1966): *Exports,* $67,000,000 (chief exports, 1965: rice, $51,898,000; rubber, $35,094,000); *imports,* $111,000,000 (chief imports, 1965: iron and steel, $10,954,000; nonelectrical machinery, $10,339,000). *Chief trading partners* (1965): France (took 19% of exports, supplied 20% of imports); Japan (took 5% of exports, supplied 19% of imports).
Transportation: *Roads* (1964), 3,181 miles (5,119 km); *motor vehicles* (1965), 23,872 (automobiles, 15,998); *railways* (1965), 291 miles (468 km); *national airline,* Royal Air Cambodge; *principal airport,* Phnom Penh.
Communications: *Telephones* (1966): 4,775; *radios* (1965), 965,000; *newspapers* (1965), 14 (daily circ., 42,000).

Internal Politics. Communist elements in the impoverished western province of Battambang rioted in April while others tried to stage a revolt in the strategically located eastern province of Kampong Cham, which borders on South Vietnam.

The Battambang uprising was designed to embarrass the righ-of-center government of Premier Lon Nol. This revolt and earlier leftist demonstrations in Phnom Penh forced Chief of State Prince Norodom Sihanouk to accept Premier Lon Nol's resignation on April 30. On May 2, Sihanouk announced the formation of a new government headed by him and including his personal adviser, Son Sann, as premier, and the extreme leftist Chau Seng (identified a week earlier as one of the leaders of the Battambang uprising), as economics minister. The move restored the balance between right and left that had prevailed before the formation of the Lon Nol government in 1966.

Sino-Cambodian Relations. Sihanouk ordered the dissolution of all friendship associations with foreign countries in September, a move directed against the Cambodian-Chinese Friendship Association, a channel for Communist Chinese subversion. Leftist cabinet ministers Chau Seng and So Nem publicly opposed the move and were dismissed from their posts by Sihanouk. So Nem was the minister of health and former chairman of the association, and Chau, in addition to being economics minister, was the editor of a French-language paper that published Peking's denunciation of the dissolution. The chief of state closed all privately owned newspapers, many of which were pro-Chinese. The situation improved when Communist China pledged future noninterference in Cambodian affairs, and Sihanouk reversed his previous decision to recall his ambassador.

Vietnam War. In the fall of the year, the U. S. government expressed its belief that Cambodia was increasingly being used as a Vietcong sanctuary, and that military material was being shipped in through Sihanoukville for use in South Vietnam. American officials in the area repeatedly claimed that the Vietcong crossed the Cambodian border almost at will, although not necessarily with the knowledge of the Cambodian government. Late in November two U. S. newsmen reported the discovery of a Vietcong camp site 4 miles (6 km) inside Cambodia. It appeared to have been used for several months. Cambodia's leaders denied its existence and, although they conceded that the Vietcong cross from Vietnam, insisted that there were no permanent camps in Cambodia.

Foreign Relations. The visit in November of Mrs. John F. Kennedy to dedicate a street in Sihanoukville to her husband's memory (and to see the temples at Angkor) failed to improve U. S.-Cambodian relations, broken at Cambodia's initiative in 1965. Prince Sihanouk stated repeatedly that diplomatic ties could be restored if the United States would recognize what Cambodia claims are its borders with Thailand and South Vietnam, and would guarantee that neither American nor South Vietnamese forces would transgress its frontier.

The USSR gave Cambodia five MIG-17 fighter planes in April and improved its relations again in June by recognizing the frontiers claimed by Cambodia. It was followed in this by the Vietcong, North Korea, North Vietnam, and China. France and West Germany had already recognized them.

Economy. Premier Son Sann made efforts to restore confidence among private investors, and gave guarantees against nationalization to foreigners who aided agricultural development. Cambodia's foreign exchange reserves continued stable despite apparently increased smuggling (especially of rice), which cut into external earnings, and widespread blackmarketing of foreign currency.

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CAMEROON

The year 1967 was generally stable and prosperous in Cameroon, with few changes in government or government policy. President Ahmadou Ahidjo pursued a neutral foreign policy, which extended to neighboring strife-torn Nigeria. The budget was balanced, and there was a steady flow of funds for development projects. The major note of unrest concerned a bloody riot, which occurred in late 1966.

Internal Affairs. On Dec. 31, 1966, long-standing tensions between Bamiléké and Bakossi tribesmen in West Cameroon surfaced in a riot that resulted in 68 deaths. Federal troops restored order, and by June 1967, 150 rioters had been tried and convicted. Elections scheduled for West Cameroon were postponed until Dec. 31, 1967. The Cameroon National Union retained all seats.

CAMEROON • Information Highlights

ASIA
AFRICA

Area: 183,568 square miles (475,442 sq km).
Population: 5,229,000 (July 1, 1965 est.).
Chief Cities (1963 est.): Yaoundé, the capital, 101,000 (1965 est.); Douala, 150,000; Nkongsamba, 60,000; Kumba, 50,000.
Government: *President*—Ahmadou Ahidjo (took office for 2d 5-year term April 1965); *Vice President*—John N. Fonda (same term). *Parliament*—National Federal Assembly, 50 members (party seating, 1967: all members of the Cameroon National Union).
Religious Faiths: Animist, 48% of population; Roman Catholics, 20%; Muslims, 14%; Protestants, 6%; others, 12%.
Education: *Total school enrollment* (1964)—726,076 (primary, 693,268; secondary, 23,356; teacher-training, 1,474; technical, 6,814; higher, 1,164).
Finance (1966–67 est.): *Revenues*, $128,000,000; *expenditures*, $121,400,000; *monetary unit*, CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1965): $670,000,000.
Cost of Living Index (1966): 127 (1958=100).
Manufacturing (metric tons): Aluminum (1966), 48,720.
Crops (metric tons, 1965–66 crop year): Sweet potatoes and yams, 264,000; maize, 170,000; peanuts, 129,700; bananas (1963–64), 142,000; cocoa beans (1966–67), 85,000.
Minerals (1965): tin, 41 metric tons.
Foreign Trade (1965): *Exports*, $139,000,000 (chief exports: cocoa, $27,600,000; coffee, $26,800,000; aluminum, $19,957,000); *imports*, $152.000,000 (*chief imports*, 1964: woven cotton fabrics, $8,084,000; trucks and lorries, $4,785,000). *Chief trading partners* (1964): France (took 39% of exports, supplied 53% of imports).
Transportation: *Roads* (1964), 8,531 miles (13,729 km); *motor vehicles* (1965), 41,567 (automobiles, 18,720); *railways* (1965), 330 miles (531 km); *principal airport*, Douala.
Communications: *Telephones* (1966): 4,200; *newspapers* (1964), 3 (daily circulation, 18,000).

Also late in December 1966, Victor Kanga, a cabinet minister since 1960, was tried and convicted for disseminating false rumors.

Foreign Relations. Cameroon remained neutral while neighboring Eastern Nigeria, which had declared itself the independent republic of Biafra in May 1967, was involved in open warfare with Nigerian federal forces. At the Organization of African Unity meeting in Kinshasa, Congo, September 11–14, Cameroon was one of six nations named to a commission to investigate means of ending the Nigerian civil war. In the Middle East conflict, Cameroon aligned itself with the bulk of French-speaking Africa by taking a position midway between support of the Arabs and Israel.

During 1967, President Ahidjo traveled widely in an effort to cement friendly relations abroad. In February he visited the Ivory Coast, Mali, and Mauritania; in June, Yugoslavia; and in October, the United States.

Economy. For the second consecutive year Cameroon balanced its budget without external aid. Negotiations were begun to finance the second phase of the Transcameroon railway. Sources backing the project include the European Development Fund, France, and the U. S. Agency for International Development. Other foreign funds were allocated for road construction and development of plantations.

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CANADA

CANADA

Canada inaugurated the 1967 Centennial of Confederation on New Year's Eve with the lighting of a symbolic flame on Parliament Hill in Ottawa.

The highlight of the centennial was the Universal and International Exhibition of 1967—Expo 67—held at Montreal and visited by a record 50 million people in six months of operation (April 28–October 29). But every Canadian center, from the largest cities down to the smallest hamlets, joined in the celebrations throughout the year with parades, picnics, sports spectaculars, and a variety of permanent centennial projects that ranged from Ontario's multimillion-dollar Centre of Science and Technology (in Toronto) through new libraries and museums to a sewer system in one prairie town. The success of Expo 67 led to plans to make it a permanent fair honoring the concept "Man and His World." (See also EXPO 67.)

The outstanding event of the year was the state visit (June 29–July 5) of Queen Elizabeth and Prince Philip to Ottawa and Expo. On Dominion Day, July 1 (birth date of the Confederation and a national holiday), the Queen personally received addresses of loyalty from the Parliament. During the summer, the Centennial Train and the Centennial Caravan—two sets of "museums on wheels" depicting Canada's history—crisscrossed the country, as did the spectacular military tattoo produced by the Canadian armed forces.

In April, Prime Minister Lester B. Pearson announced the creation of a national system of honors, the Order of Canada, with three grades of honors and awards—Companion of the Order for outstanding service, Medal of Service for meritorious service, and Medal of Courage for acts of courage. A mass investiture of 35 Canadians as Companions of the Order and 55 with Medals of Service was held on November 24 in Ottawa.

From July 23 to August 6, Winnipeg, Man., played host to the Pan-American Games, the biggest sports event ever held in Canada. Canadian athletes placed second in the competitions, winning 92 medals; the United States took first place with 225 medals.

The enjoyment of centennial year and its many cultural activities was dampened, however, by the increasingly strong revival in the province of Quebec of expressions of discontent—especially of separatism. French President de Gaulle aggravated the situation by his outspoken campaign for a "Free Quebec," which he began during his visit to Expo late in July.

A second sobering note in the round of festivities was Canada's economic condition. While the cost of living continued to rise, unemployment increased. In an attempt to counteract inflationary tendencies (made more urgent by the devaluing of the British pound and French pressure on the dollar), the federal government twice raised the bank rate, and its November "minibudget" (a supplemental budget) placed a 5% surcharge on personal income taxes. By the end of Canada's centennial year, grave political and economic warnings were being voiced.

FIREWORKS over the Parliament Buildings (*left*) and an outsized birthday cake (*right*) marked the celebrations in Ottawa for the 100th anniversary of Canada's Confederation in July. Queen Elizabeth II is seen on steps at right.
WIDE WORLD

NATIONAL FILM BOARD OF CANADA

ROLAND MICHENER, new governor-general of Canada, meets Queen Elizabeth upon her arrival by air in Ottawa.

ROLAND MICHENER was sworn in on April 17, 1967, as the 20th governor-general of Canada, after being appointed to that post by Queen Elizabeth II on the recommendation of Canadian Prime Minister Pearson. Michener's position as the personal representative of the British sovereign is formally the nation's highest.

The son of a political leader and provincial legislator, Daniel Roland Michener was born in Lacombe, Alta., on April 19, 1900. After graduating from the University of Alberta (1920), he studied as a Rhodes scholar at Oxford University (Engand), and in 1924 he entered private law practice in Toronto. He was a Progressive Conservative member of the Ontario legislature from 1945 to 1948 and was elected to the Canadian House of Commons in 1953, serving as speaker of that body from 1957 to 1962. From 1964, Michener had been Canada's high commissioner (ambassador) to India.

POLITICAL AFFAIRS

With consistent support from the small Social Credit and Créditiste parties in Parliament, the minority Liberal government of Lester B. Pearson managed to avoid any major parliamentary crises during the year. Its most dangerous moments came in the early months when high-ranking military officers challenged the government's plan to integrate the army, navy, and air force into a single body named the Canadian Forces, and the opposition used obstructionist tactics against the controversial measure. The proposed introduction of a standard uniform for all branches and the abandonment of service traditions had already aroused strong reactions in 1966, and the emotion-charged debates in the House of Commons threatened to become a repetition of the bitter "flag controversy" of 1965 until the government enacted the legislation by using a limited form of cloture. Thereafter the controversy quickly died.

Governors-General. Roland ("Roly") Michener, a native of Alberta, was sworn into office on April 17 as Canada's 20th governor-general. He succeeded Georges P. Vanier—soldier, lawyer, diplomat, and governor-general since 1959—who died on March 5. Vanier was Canada's second native-born governor-general. His immediate predecessor, Vincent Massey, the first native-born governor-general, died in London on December 30.

Cabinet Changes. A number of cabinet changes occurred during the year. On January 4, Prime Minister Pearson announced the return of Walter L. Gordon, who had resigned as finance minister in November 1965 in consequence of Liberal reverses in the general elections. The return of Gordon, an outspoken advocate of Canadian economic nationalism and critic of United States control over Canada's economy, sparked rumors of a government policy shift away from the traditional Liberal continentalism of Pearson and Finance Minister Mitchell Sharp. Gordon was appointed minister without port-

CANADA • Information Highlights

NORTH AMERICA

Area: 3,851,809 square miles (9,976,197 sq km).

Population: 20,014,880 (1966 census).

Chief Cities (1966 census): Ottawa, the capital, 290,741; Montreal, 1,222,255; Toronto, 664,584; Vancouver, 410,375.

Government: *Governor-General*—Roland Michener (took office April 17, 1967); *Prime Minister*—Lester Bowles Pearson (took office April 22, 1963). *Parliament*—Senate, 102 members (appointed for life); House of Commons, 265 members (party seating, 1967: Liberal, 131; Progressive Conservative, 98; New Democratic, 21; Créditiste, 9; Social Credit, 5; Independent Liberal, 1).

Religious Faiths: Roman Catholic, 45.7% of population; United Church of Canada, 20.1%; Anglican, 13.2%; Presbyterian, 4.5%; Lutheran, 3.6%; other, 12.9%.

Education: *Total school enrollment* (1964)—5,050,616 (primary, 3,491,889; technical and secondary, 1,274,820; higher, 283,907).

Finance (1966 est.): *Revenues*, $7,661,000,000; *expenditures*, $7,662,000,000; *public debt* (1965), $24,600,000,000; *monetary unit*, Canadian dollar (1.08 dollars equal U. S.$1).

Gross National Product (1966): $53,461,000,000.

National Income (1966): $39,821,000,000; average annual income per person, $2,001.

Economic Indexes (1966): *Industrial production*, 169 (1958=100); *agricultural production* (1965), 117 (1956–57=100); *cost of living*, 116 (1958=100).

Manufacturing (metric tons, 1965): Gasoline (1965), 15,119,000; crude steel, 9,072,000; newsprint paper, 7,632,000; wheat flour, 1,920,000; aluminum, 823,200; lumber (1965), 23,675,000 cubic meters.

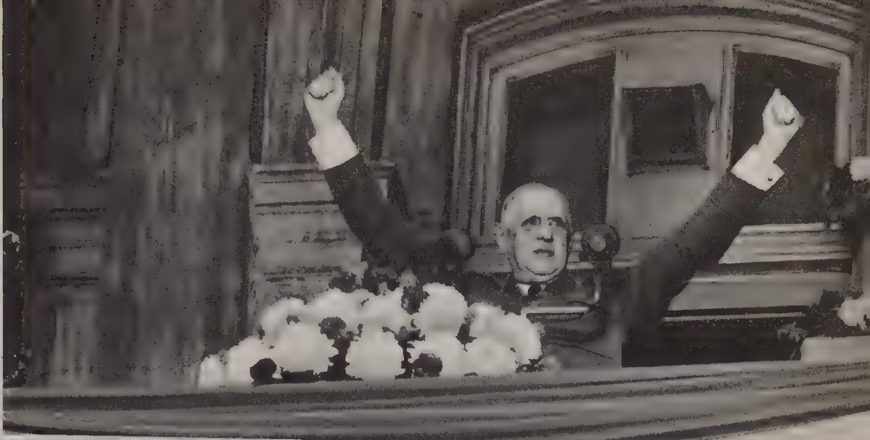
Crops (metric tons, 1966–67 crop year): Wheat, 22,982,000 (ranks 3d among world producers); oats, 5,994,000 (world rank, 3d); linseed, 600,000 (world rank, 2d).

Minerals (metric tons, 1965): Gypsum, 5,634,000 (ranks 2d among world producers); zinc (1966), 945,600 (world rank, 1st); titanium slag, 495,244 (world rank, 2d); lead (1966), 294,000 (world rank, 2d); nickel, 243,884 (world rank, 1st); gold, 3,587,168 troy ounces (world rank, 3d).

Foreign Trade (1966): *Exports*, $13,536,000,000 (chief exports: manufactured goods, $2,676,900,000; wheat, $1,058,200,000; newsprint, $895,400,000; wood, $695,600,000); *imports*, $14,900,000,000 (chief imports, 1965: nonelectrical machinery, $1,587,200,000; transport equipment, $1,146,900,000; bus and auto parts, $682,500,000). *Chief trading partners* (1965): U. S. (took 56% of exports, supplied 70% of imports); Britain (took 14% of exports, supplied 7% of imports).

Transportation: *Roads* (1964), 505,191 miles (813,004 km); *motor vehicles* (1966), 6,927,327 (automobiles, 5,499,527); *railways* (1965), 43,355 miles (69,758 km); *merchant vessels* (1966), 65 (284,000 gross registered tons); *national airlines*, Air Canada, Canadian Pacific Airways; *principal airports*, Montreal, Toronto, and Vancouver.

Communications: *Telephones* (1967): 7,880,471; *television stations* (1967), 324; *television sets* (1967), 5,900,000; *radios* (1964), 10,000,000; *newspapers* (1964), 114 (daily circulation, 4,385,000).



"Vive le Québec libre."

—French President de Gaulle, Montreal, July 24, 1967.

PICTORIAL PARADE

"Every province of Canada is free. Canadians do not need to be liberated."

—Prime Minister Pearson, Ottawa, July 25.

UPI

folio to carry out specific projects for the prime minister, but it was announced that he would get a portfolio later. On April 4 he was made president of the Privy Council. Despite reports that he and Sharp had clashed in cabinet meetings over economic policies, no such split appeared in their public statements. Gordon succeeded Guy Favreau, who had resigned as president of the Privy Council and registrar general (and who died on July 11).

In the April cabinet shuffle John N. Turner was transferred from minister without portfolio to registrar general, to which office the newly created department of consumer affairs was added in August. Lucien Cardin resigned as minister of justice and attorney general, and Pierre Elliot Trudeau assumed those posts. Jean Chrétien became minister without portfolio. These last appointments were interpreted as a move by Pearson to increase the radical Quebec voice in the cabinet, since 9 of the 27 cabinet members are from that province.

When John W. Pickersgill resigned from the cabinet and from Parliament on September 18 to become chairman of the new Canadian Transport Commission, Paul T. Hellyer moved from his controversial national defense post to become minister of transport, a step generally believed to enhance his chances of succeeding Pearson as prime minister. Léo Cadieux became minister of national defense, and Charles R. M. Granger was added to the cabinet as minister without portfolio.

Changes in Party Leadership. On December 14, Prime Minister Pearson announced that he would resign as both prime minister and party head as soon as a successor was chosen to lead the Liberal party. Persistent rumors of his forthcoming retirement had been denied so frequently during the year that the announcement came as a complete surprise. On December 17, Liberal party officials announced that a leadership convention would be held at Ottawa on April 4 to 6, 1968. (See also PEARSON.)

Earlier, John G. Diefenbaker, leader of the Progressive Conservative party (the official opposition), demanded the calling of a national party leadership convention in response to the "dump Dief" campaign led by Dalton Camp, the party's national president. The convention was held at Toronto in September. Of the several aspirants to the leadership, only former cabinet ministers George Hees and Davie Fulton and provincial premiers Duff Roblin of Manitoba and Robert L. Stanfield of Nova Scotia had any real hopes of success. At the last moment Diefenbaker announced that he would not retire but would stand for reelection. He was eliminated from the contest on the third ballot, and the victor, on the fifth ballot, was Robert L. Stanfield. Diefenbaker continued to sit in Parliament and to attract public attention by his criticism of the government, while Stanfield experienced difficulty in projecting his image as the new Progressive Conservative leader.

Another national political leader, Robert N. Thompson, resigned as leader of the Social Credit party on March 17. Réal Caouette, leader of the Ralliement des Créditistes, which broke away from Social Credit in 1964, stated that Thompson's resignation would make a national reunion of the party easier. Failure of the party to call a leadership convention led H. A. Olson, Social Credit member for Medicine Hat, Alta., to join the Liberals in Parliament on September 20.

The de Gaulle Affair. A hint of strained relations between Canada and France was noted when President de Gaulle's government virtually boycotted the special ceremony at Vimy Ridge (near Arras, France) on April 9 commemorating the Canadian Corps' victory in 1917. But the depth of the rift became apparent only when the French president visited Canada officially in late July.

Even before de Gaulle's arrival, a quarrel over precedence broke out between the Quebec government and the federal government. As de Gaulle's cruiser, the *Colbert*, entered the St. Lawrence River, on the way to the city of Quebec, it rejected the custom of flying the host country's flag. The next day (July 24), during the motor trip to Montreal (which de Gaulle compared in atmosphere to the liberation of France from the Nazis in 1944), provincial officials arranged demonstrations of French-Canadian nationalism.

A crisis was reached at Montreal when de Gaulle shouted the Quebec separatist slogan *"Québec libre"* (Free Quebec). Reacting to a deluge of protests against the president's meddling in Canada's internal affairs, Prime Minister Pearson, after a day-long cabinet meeting on July 25, rebuked de Gaulle for his encouragement of separatism. The next morning de Gaulle announced that he would return to France immediately without visiting Ottawa. Premier Daniel Johnson of Quebec said he "bitterly deplored" Pearson's rebuke to de Gaulle. (See also QUEBEC.)

The other official visits to Expo by some 60 heads of state or their representatives passed without incident, although President Tito of Yugoslavia canceled his visit in the face of threats to his life from anti-Communist refugees.

Unrest in Quebec. An unrepentant de Gaulle announced increased economic aid to Quebec in August, and at a November 27 press conference he repeated his statements supporting French Canadian separatism. The latter action was denounced by Pearson as "intolerable" interference in Canadian affairs, but the net result of de Gaulle's anti-Canadian policies was rapid escalation of separatist political activity in Quebec, including the decision of René Lévesque, a former Quebec cabinet member, to leave the Liberal party and support separatism after the Quebec Liberal Federation resolved in October to preserve federalism.

Premier Johnson of Quebec announced in September his own position on the Canadian constitutional question—namely, that his Union Nationale government was pledged to obtain a new Canadian constitution that would end Quebec's isolation. But when the unofficial, 2,000-delegate Estates General of French Canada met in Montreal in November and adopted strongly separatist resolutions, Johnson publicly disavowed their extremism.

De Gaulle's November pronouncement coincided with the Confederation of Tomorrow Conference, a meeting of provincial leaders called by Ontario Premier John Robarts and held in Toronto. There de Gaulle's statements were publicly condemned by all participants except Premier Johnson of Quebec. From the time that Premier Robarts announced the conference, Prime Minister Pearson refused all federal participation therein and countered with his own plan to hold a federal-provincial constitutional conference early in 1968.

Bilingualism Commission. On December 5 the first volume of the report of the Royal Commission on Bilingualism and Biculturalism (a commission established by Prime Minister Pearson in 1963) was released. It called for official bilingualism in Ontario and New Brunswick, conversion of the Ottawa-Hull area into a bilingual federal district, and official provincial bilingualism in areas where 10% of the population speak the second language. Public reaction ranged from doubts that the report had come in time to stop the drift toward separatism to a charge by René Lévesque that its proposals were designed as a red herring to divert the attention of Quebec from its national destiny.

Legislation. Other than the controversial act unifying the Canadian armed forces, the most important legislation of the year was the decision in November to suspend the death penalty for a trial period of five years, except in cases involving the murder of policemen or prison guards. Another controversy arose in Parliament in October over legislation for a Canadian Radio Commission to promote public broadcasting at the expense of private interests, to further Canadian unity, and to regulate all aspects of broadcasting in Canada. Legislation to broaden the grounds for divorce in Canada was still under consideration at the end of the year.

Elections. During the year provincial elections were held in Alberta, Nova Scotia, Ontario, Saskatchewan, and New Brunswick. In each election the incumbent government was returned to power (see the separate articles on the provinces). In five federal by-elections (special elections held to fill vacancies) on May 29, the Liberals retained four Quebec seats but lost one in northern Ontario to the New Democratic party. Three more by-elections, on November 6, brought no change in party standing in the House of Commons. In one of these by-elections, Robert Stanfield, the new leader of the Progressive Conservatives, entered the Commons for the Nova Scotia constituency of Colchester-Hants.

Foreign Affairs. The Canadian government's continued efforts to remain neutral regarding the Vietnam War in order to enhance Canada's claim to be an "honest broker" in international controversies came under repeated attack during the year from both pro- and anti-American interventionist groups.

In January, Prime Minister Pearson received a petition from 360 Canadian university professors requesting the Canadian government to halt the sale of arms to the United States until U. S. intervention in Vietnam ends. The prime minister replied that arms sales were part of the defense-sharing agreement to which his government was pledged.

When opposition leader Diefenbaker called on the government to condemn the bombings of North Vietnam, External Affairs Minister Paul Martin replied that such a statement would damage Canada's role as a peacemaker and expressed the hope that the International Control Commission, of which Canada is a member, might soon be able to help resolve the war. T. C. ("Tommy") Douglas, leader of the New Democratic party, compared Martin's stand to Pontius Pilate's washing his hands of responsibility, and concluded, "The time for quiet diplomacy is past; the time has come to speak out." In March, Pearson reiterated his claim that quiet diplomacy was Canada's only hope in influencing developments in Vietnam.

In a speech before Parliament on April 11, Martin unveiled a 4-point proposal for peace: (1) disengagement of military forces linked to restoration of the demilitarized zone (to be internationally inspected) between North and South Vietnam; (2) freezing of military activities; (3) an end to all hostilities; and (4) a return to the 1954 Geneva cease-fire provisions. This plan was accepted at once by South Vietnam but rejected by North Vietnam as "a crafty scheme of the United States imperialists." On September 27, Martin placed the plan before the UN General Assembly.

In the wake of the Israeli-Arab hostilities, Prime Minister Pearson outlined a plan on June 8 for guaranteeing Israeli access to the Suez Canal and the Gulf of Aqaba, creation of a UN-policed demilitarized zone between the combatants, and a just settlement of the Arab refugee problem. Eleven days later the prime minister endorsed U. S. President Johnson's 5-point peace plan, which went further than his own by urging an end to the arms race in the Middle East. On June 22, Pearson criticized the USSR for rearming the Arabs, and on June 27 he announced a Canadian grant of almost $1.5 million in aid to Arab refugees. Pearson's policy in the crisis consistently stressed Canada's neutrality and the need for a UN-arranged peace.

The controversial withdrawal of Canadian units from the UN Emergency Force at the request of the Egyptian government, which was the prelude to the outbreak of fighting, was explained in a report by UN Secretary-General U Thant in mid-July. The report showed that Egypt had demanded Canadian withdrawal out of fear that Canada's navy was about to be used to support passage of Israeli shipping through the Gulf of Aqaba.

THE CANADIAN ECONOMY

Introducing his "minibudget" (supplemental budget) at the end of November, Finance Minister Mitchell Sharp reviewed the nation's economic situation in the Centennial year. "During 1967," he said, "there has been deceleration in the rapid economic expansion which took place between 1961 and 1966." He forecast a 7% increase in the gross national product during the year but indicated that, in volume, the increase would be less than half because of rising prices. The year, he concluded, would see a "slowing down in the rate of production, a slight downturn in total employment, and a rise . . . in unemployment. The economy has ceased to be under the serious strain it experienced last year, and has developed a small amount of spare capacity."

THE CANADIAN MINISTRY

(In order of precedence in the Privy Council as of January 1968)

Prime Minister, **Lester Bowles Pearson**
Secretary of State for External Affairs, **Paul J. J. Martin**
Minister of Trade and Commerce, **Robert H. Winters**
Minister of Transport, **Paul T. Hellyer**
President of the Privy Council, **Walter L. Gordon**
Minister of Finance and Receiver General, **Mitchell W. Sharp**
Minister of Public Works, **George J. McIlraith**
Minister of Indian Affairs and Northern Development, **Arthur Laing**
Minister of National Health and Welfare, **Allan J. MacEachen**
Minister of Fisheries, **Hédard J. Robichaud**
Minister of Veterans Affairs, **Roger Teillet**
Secretary of State, **Judy LaMarsh**
Minister of Industry and of Defense Production, **Charles M. Drury**
Minister of Labour, **John R. Nicholson**
Minister without Portfolio and Leader of the Government in the Senate, **John J. Connolly**
Minister of Forestry and Rural Development, **Maurice Sauvé**
President of the Treasury Board and Minister of National Revenue, **Edgar J. Benson**
Minister of National Defence, **Léo Cadieux**
Solicitor General, **Lawrence T. Pennell**
Minister of Energy, Mines, and Resources, **Jean-Luc Pépin**
Minister of Manpower and Immigration, **Jean Marchand**
Minister of Agriculture, **John J. Greene**
Postmaster General, **Jean-Pierre Côté**
Minister of Justice and Attorney General, **Pierre Elliot Trudeau**
Minister without Portfolio, **John Chrétien**
Minister without Portfolio, **Charles R. M. Granger**
Registrar General, **John N. Turner**

Major Economic Developments. At the beginning of 1967 the Canadian economy was still operating at a high level, but concern was being expressed that a recession might be approaching. Smaller corporate profits, leveling out in some domestic industries, and price rises that outstripped productivity increases were the main reason for this concern. These trends were maintained in the first half of the year as the gross national product rose about 1.7% per quarter, but prospects of a sharply reduced wheat crop cast a shadow on this general condition of stability. By November, the cost-of-living index had risen by 3.8% over the same date in 1966, and the government instituted further anti-inflationary measures in its mini-budget by increasing income taxes and reducing government spending.

Canada's exports reached $10.8 billion in the first nine months of 1967, and imports stood at $11.3 billion for the same period. To a large extent, this narrowing of the export-import gap was due to a surplus of $383 million in the travel and tourist account attributable to the success of Expo, compared with a deficit of $32 million in the same account for 1966.

Canada's labor force grew by 3.6% from November 1966 to September 1967, but the 3.2% unemployment rate of November 1966 had risen to 4.3% by the same month in 1967. Private investment was expected to be only slightly higher than in 1966, a factor reflected in the 10% decline in housing starts in the third quarter of 1967, which intensified the serious housing shortage that existed in major Canadian cities.

An important event of 1967 was the release in February of the report of the Royal Commission on Taxation, headed by Kenneth L. Carter, a Toronto tax accountant. Its main recommendations were for taxation of all forms of income, including capital gains; major reductions in personal income tax rates; taxation of families as units; a flat 50% tax on all corporations; and reduction of present tax advantages enjoyed by insurance companies, cooperatives, and mining corporations. Considerable opposition was expressed to the last recommendation by the groups directly affected and by provincial premiers.

The completion of the Kennedy Round of trade negotiations in June involved few changes in Canada's tariff structure. The agreements affect duties on $4.5 billion of Canadian trade—$2.5 billion worth of imports and $2 billion of exports.

Finance. Budget revenues for the 1967–68 fiscal year were estimated at $9 billion and expenditures at $9.7 billion, with an expected deficit of $740 million. The budget presented on June 1 made no changes in personal or corporation taxes and was generally described as a standpat program. Opposition critics noted that government spending was climbing at a rate of 20%, and called for positive measures to reduce unemployment and stabilize prices. The supplemental budget of November attempted to meet those needs by increasing personal income and other taxes to add $520 million in revenues and reduce the revised deficit to $80 million. Excise taxes were increased on alcoholic beverages and tobacco.

Manufacturing. Manufacturing production in August stood 4.4% above the August 1966 figure. Durable goods accounted for 3.9% of the rise. Iron and steel production fell slightly during the same period, but electricity and gas production rose.

Agriculture. Excessively dry weather in the west and excessive rains in eastern Canada during the spring reduced crop production during 1967. Cash farm income in the first nine months was $1,758,680,000, compared with $1,704,140,000 for the same period in 1966. But by late autumn farmers were talking of withholding their produce as a means of getting public attention and government action on their plight, which resulted from a cost-price squeeze. On May 24 several thousand farmers invaded the Parliament buildings in Ottawa in a noisy demonstration in favor of a $5 per hundredweight minimum for industrial milk.

Canada's important wheat crop was estimated regionally to be from 4% to 30% lower than in 1966, and at the end of October 1967 overseas shipments were almost 100 million bushels behind those for the same period in 1966. Canadian wheat was also encountering increasing competition in world markets, and by autumn prices were being forced down, largely by U. S. sales in traditionally Canadian markets. The one promising development was the Soviet Union's agreement to purchase at least 75 million bushels of Canadian wheat before July 1968.

Mining. At the end of October the Supreme Court of Canada made a major decision affecting the future of the Canadian mining industry when it determined that offshore mineral rights belong to the federal government. A second important development was the incentive to uranium mining at Elliot Lake, Ont., as a result of contracts obtained in September from Japanese electrical utilities groups for delivery of 52 million pounds of uranium concentrates over the next decade. Mining production fluctuated throughout the year but generally showed declines from 1966 production figures.

Transportation. As part of its plan to reduce spending, the government announced in November that the proposed causeway from Prince Edward Island to the mainland is to be postponed once more. In June work was begun on the fifth major rebuilding in the 138-year history of the Welland Ship Canal; it is aimed at doubling the capacity of this vital link in the St. Lawrence-Great Lakes system. (See also CANALS.) In November, Alitalia Airlines announced future direct flights between Toronto and Rome. At the same time the Netherlands government applied pressure on the Canadian government to increase landing rights for KLM flights to Canada.

Communications. The Board of Broadcast Governors' recommendation in June that a Barrie, Ont., television station be allowed to locate its transmitter closer to Toronto aroused public hostility because the move would block out two neighboring U. S. channels. A decision rests with the cabinet, which seems reluctant to adjudicate in an issue with dangerous political potentials. As part of the government's reduced spending program, the foreign service of the Canadian Broadcasting Corporation was merged with the general organization of the CBC for budgetary purposes. This seems to be a compromise with the suggestion that the influential foreign service should be abandoned completely.

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CANADIAN LITERATURE

The Canadian literary scene in 1967 reflected the general celebration of the Centennial of Confederation in a large and varied selection of new books. In addition to much excellent fiction, poetry, and biography, there were numerous volumes on public affairs and history, as well as children's books, humor, and scholarly publications. In special tribute to the Canadian land and people, there were two superb pictorial displays: Roloff Beny's *To Every Thing There is a Season,* with text by Milton Wilson, and *Canada/a Year of the Land,* with color plates by the National Film Board and text by Bruce Hutchison.

Public Affairs. Analyses of Canadian society appeared in many forms. Richard Jones, in his *Community in Crisis,* saw a need for a new federalism. *Political Realignment,* by Premier Ernest C. Manning of Alberta, calls for a reorganized 2-party system in federal government. Robert Arthur John Phillips' *Canada's North* reviews the value and history of the Canadian northland. In *Doctors' Strike,* Robin F. Badgley and Samuel Wolfe blamed the 1962 doctors' strike on poor planning by the Saskatchewan government in presenting the medical care program that was introduced that year. Social phenomena were treated in Simma Holt's *Sex and the Teen-Age Revolution* and in *Man and his Family* by Wilder Penfield. Northrop Frye published his searching and perceptive McMaster University Whidden lectures on progress under the title *The Modern Century.*

History. Among the outstanding historical works of 1967 was Gustave Lanctôt's *Canada and the American Revolution 1774–1883,* which indicates that the American Revolution helped open Canadian minds to political change. *The Canadians 1867–1967,* a series of essays edited by James Maurice Stockford Careless and R. Craig Brown, pictures the country and its changing attitudes. Leslie Frost's semiautobiographical *Fighting Men* is a military history that criticizes military and political leadership in wartime, with special attention to the action of the men from Orillia, a town in southern Ontario, during World War I. The book serves as a reminder that "to remember the old is to add strength and background to the new." Herbert Fairlie Wood's *Vimy!* is a definitive and moving account of the fierce World War I battle at Vimy Ridge, in which Canadian troops captured the German position.

Fiction. Surprisingly, no good historical novel appeared in 1967, a year of great historical significance. Alienation has become the major theme of most Canadian novelists. In Hugh MacLennan's *Return of the Sphinx,* about the new urbanized Quebec with its modernized Roman Catholicism and its movement toward separatism, plot and characters are unfortunately swamped by the obvious and theme-laden dialogue. In Scott Symons' controversial and unconventionally written *Place d' armes* sexual perversion becomes a means of acquiring love for all of mankind. Austin C. Clarke, in *The Meeting Point,* revealed the problems encountered by West Indians adapting to a new way of life in Toronto.

Scratch One Dreamer by David Lewis Stein is the story of an alienated young liberal confronted with the problem of facing himself if he ignores the plight of his fellow man. George Bowering's strong first novel, *Mirror on the Floor,* is the story of the breakdown and disintegration of a teenage beatnik girl. The book unfortunately is marred by technical gimmicks. In *The Newel Post,* Cicely Louise Evans explores the mind of a woman scarred by an alcoholic ex-husband who has left her with a retarded child; she eventually faces love and life at the moment of losing both. Fred Bosworth's haunting novel

The Sparrow's Fall examines the sometimes tragic effects of the introduction of new social mores to northern Indians.

As an antidote to gloom came *Watcha Gonna Do Boy . . . Watcha Gonna Be?*, Peter Taylor's joyful novel about a teenage boy who spends his 17th summer working on a railroad and learning about sex, drink, and life in general.

Poetry. Canadian poets, especially the newer and younger ones, produced a variety of interesting works. Lionel Kearns' *Pointings* reveals his linguistic interest in stress. *Abracadabra,* by John Robert Colombo, contains op, pop, "found," and satiric poems. D. G. Jones' extremely personal *Phrases from Orpheus* is a chiseled assertion of the desirability of change. The detailed lyrical expression in Alfred Prudy's *North of Summer* evokes the vast and lonely Arctic with its friendly Eskimos. The well-known poet Irving Layton shocks, annoys, and still fascinates in *Periods of the Moon.* Raymond Souster, in *As Is,* wrote again on love and its variations and, as usual, satisfies like "the warmed and gentle rain bath of spring!" These poets and many others are included in A. J. M. Smith's *Modern Canadian Verse.*

Biography and Autobiography. The quality of biography and autobiography was uneven. Kathleen Daly Pepper's *James Wilson Morrice,* about one of the first Canadian painters to break with traditional realism, is excellent art criticism but naive biography. *LaSalle,* by E. B. Osler, though introducing new material on the explorer that shows him to have been unreliable, arrogant, and perhaps mentally unbalanced, is less exciting than it might have been. A scholarly and fascinating book is Clara Thomas' *Love and Work Enough,* about Anna Brownell Jameson, the 19th century art and literary critic.

Quite unscholarly but very amusing is *And Now . . . Here's Max,* broadcast reminiscences by Max Ferguson, Canada's leading radio satirist. Another radio personality, Helen Dacey Wilson, pleasantly relives a pleasant past in *More Tales from Barrett's Landing,* about her Nova Scotia family. Two former Royal Canadian Mounted Police officers have written biographies: Clifford W. Harvison's *The Horsemen* reviews the role of the police and is full of interesting anecdotes. Henry A. Larsen recounts some of his experiences in *The Big Ship.* While Harold Horwood's *The Foxes of Beachy Cove* is really a fine natural history, it can also be considered the autobiography of an animal lover and observer.

Humor. There was a paucity of humorous writing in 1967. However, in *Willows Revisited,* Paul Hiebert satirically places a group of would-be poets in a weed-sprouting cemetery to commemorate the demise of Sarah Binks, "the sweet songstress of Saskatchewan," a character Hiebert created in 1947. *Willows Revisited* does not have the *joie* of the earlier *Sarah Binks,* but such characters as Bessie Udderton, Purge Potatok, D. P., and Baalam Bedfellow, Ph. D. might well too become part of the Canadian idiom.

Scholarship. Important works of scholarship included *The Art of Sinclair Lewis,* by D. J. Dooley and Sheila Egoff's *The Republic of Childhood,* "a critical guide to Canadian children's literature in English." W. S. Avis, P. D. Drysdale, R. J. Gregg, and M. H. Scargill, in their senior *Dictionary of Canadian English,* published a valuable justification for Canadian usage, recommending, for example, that the first "c" in Arctic be dropped. A great contribution to Canadian letters was made by Norah Story, whose *Oxford Companion to Canadian History and Literature* is essential for students in both fields.

Juvenile Books. Two of the best children's books centered on historical figures. These are Joseph Schull's *The Nation Makers*' a well-written account of the fathers of Confederation, and Josephine Phelan's *The Ballad of D'Arcy McGee,* about the famous Irish rebel in exile who was shot in Ottawa. Ronald Melzack's *The Day Tuk Became a Hunter* is a delightful collection of Eskimo stories tastefully illustrated by Carol Jones.

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FRENCH CANADIAN LITERATURE

Several outstanding French Canadian books appeared in 1967. Works of fiction were among the most interesting.

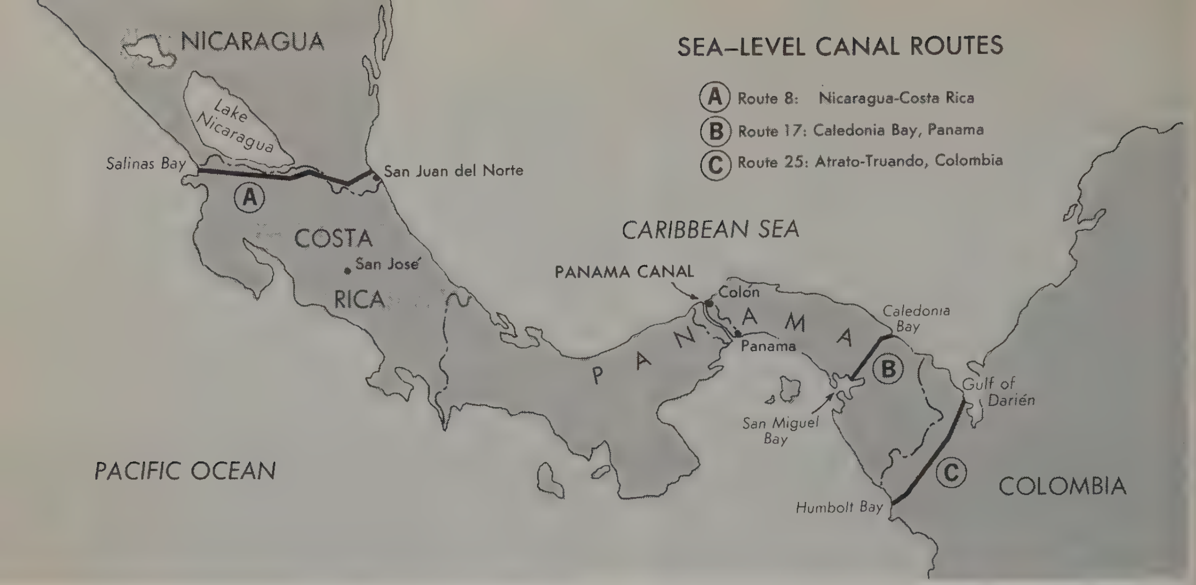
Fiction. The best three novels of the year, all by young authors, were full of humor and good spirits. Jacques Godbout's *Salut, Galarneau!,* his third novel, is the story of a simple man who operates a hot dog stand and who makes the best of a bad job and a miserable life. *Le nez qui vogue,* a second novel by Réjean Ducharme, tells of teenagers who grow sick of life as they discover the depravity of the world around them. While the subject is gloomy, the author's manner is highly poetic and whimsical. In his *Le Grand Khan,* Jean Basile revived the characters of his earlier work *La jument des Mongols. Le Grand Khan* contains many detailed and picturesque descriptions of Montreal, as well as vivid dialogues between four characters who remain friends in spite of ideological and emotional clashes. Other important novels include *Un dos pour la pluie* by Jean Hamelin, *La fugue* by André Berthiaume, and *Les rapides* by Jean Somcynski.

Poetry. By contrast, 1967 was not a particularly good year for poetry. Alfred Desrochers, Gilles Vigneault, and Gérald Godin published new collections of verse, which do not add much to their reputations. Two young poets offered promising first books. Gilles Marsolais wrote *La mort d'un arbre* and Juan Garcia produced *Alchimie du corps.* The only remarkable book of verse of the year was *Le premier mot* by Gatien Lapointe, in which he expresses his quest for truth and happiness and his growing uneasiness as he becomes increasingly aware of the poet's inability to express himself fully.

Nonfiction. The publication of the poet Saint-Denys-Garneau's *Lettres à ses amis* throws much light on his personality and sources of inspiration. In *Notre société et son roman,* the sociologist Jean Charles Falardeau has collected some of his better essays on the social content of numerous Canadian novels. *Présence de la critique,* an anthology of literary criticism compiled by Gilles Marcotte, makes many remarkable essays on the better French Canadian authors readily available. Jean Éthier Blais has collected his highly personal book reviews of recent years in two volumes of *Signets.* Also of interest are the scholarly study *Marcel Proust, critique littéraire* by René de Chantal and the useful *Bibliographie du Québec* by Philippe Garigue.

The origins of Montreal are reviewed in Gustave Lanctôt's *Montréal sous Maisonneuve.* In *Le Canada sans passeporte,* Eugène Cloutier offered a bird's-eye view of the country. *Le Canada français après deux siècles de patience* by Gérard Bergeron dealt with the question of French Canadian separatism.

GUY SYLVESTRE
Associate Parliamentary Librarian, Ottawa



NEW CANAL across the isthmus of Central America may be dug with nuclear explosives. Map shows possible routes. Route 17 (labeled B) is the least expensive one.

CANALS

Canal developments in 1967 were highlighted by bold plans and major improvements for large ship canals and irrigation canals.

Atlantic-Pacific Canal. In June 1967, President Johnson and President Marco A. Robles of Panama announced that U. S. and Panamanian representatives had reached agreement on three proposed new treaties that would provide for: (1) Panamanian sovereignty over the Panama Canal Zone; (2) continuation of U. S. bases for defense of the Panama Canal; and (3) possible construction of a new, sea-level canal or conversion of the Panama Canal from a lock canal to a sea-level canal. Alternative routes for the sea-level canal included one in Panama, one in Colombia, and one along the border between Nicaragua and Costa Rica. The canal route might be excavated by either conventional methods or the use of nuclear explosives.

A new Ceneral American canal was strongly backed by the administration. In August, President Johnson said that a sea-level canal was technically feasible, and he urged Congress to grant the Atlantic-Pacific Interoceanic Canal Study Commission $6.5 million for a 2½-year investigation to determine where and how to build one.

The commission, which has been studying the project since 1965, believes that by 1970 a water bed can be safely blasted with nuclear explosives. It picked the shortest route consistent with safety—a 48-mile (77-km) strip of jungle and mountains in Panama between the present Panama Canal and the Colombian border to the southeast. The estimated cost of nuclear construction along that line would be $750 million, which is about half the amount needed for construction of a route through northern Colombia. According to the commission, a sea-level canal could be completed by 1985, or about 15 years after work begins.

Welland Canal. In June 1967 work was started on a 6-year, $110-million project to modernize the 27-mile (43-km) Welland Canal, which links Lake Ontario and Lake Erie. This Canadian canal, part of the St. Lawrence Seaway, has eight locks for lifting ships 326 feet (99.4 meters) over the Niagara escarpment. The canal was opened in 1932.

The 9-mile (15-km) section of the canal through the industrial area of Welland is a winding water route that is crossed by six bridges. This section, which has been a bottleneck for shipping and for vehicular traffic, will be bypassed by a wider, 8-mile (13-km) long channel. The new section will provide faster passage for the growing number of large ships using the canal, and several tunnels are to be driven underneath it so that it will not be obstructed by bridges. The Welland Canal annually handles about 8,700 ships and 59 million tons (53 million metric tons) of cargo.

California Water Project. An immense water distribution project is now under construction in California. The waters of the Feather River and the Sacramento River in the northern part of the state will be spread like a web into the thirsty agricultural areas of southern California and will be distributed as far south as Los Angeles and San Diego to help supply water for those cities. Nearly 700 miles (1,125 km) of canals, tunnels, pipes, and siphons will traverse the state.

A key structure in this project is the Oroville Dam, scheduled for completion in 1968. This dam is being built on the Feather River near Oroville, about 65 miles (105 km) northeast of Sacramento. Water will run through turbines at the Oroville Dam, and the Feather River will become a controlled stream below Oroville, flowing into the Sacramento River. That river will become the channel for the Feather River water, coursing through orchard and farm country to the Sacramento-San Joaquin delta, 90 miles (145 km) south. There the water will be lifted into the Peripheral Canal, which is to be completed in the mid-1970's. This canal will direct the water around the delta area and will run 43 miles (69 km) to the California Aqueduct. The aqueduct will take the water 62 miles (100 km) to the San Luis Reservoir, east of Monterey Bay, which will store more than 2 million acre-feet of water to meet user needs as they may develop.

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CANCER

No fundamental discoveries were recorded in the prevention, diagnosis, control, or treatment of cancer in 1967. The key to improving the outlook of cancer patients remains the early diagnosis and prompt, appropriate, and adequate treatment. By means of conferences, publications, training programs, teaching films, and improved diagnostic aids and treatment facilities, current knowledge is becoming more widely available to physicians and patients throughout the world. According to estimates by the American Cancer Society, 600,000 new cases will be diagnosed in the United States in 1968, and there are now 2 million living patients presumably cured of the disease.

Smoking and Cancer. The incidence of lung cancer in the United States continues to rise, with an all-time high of 52,000 cases diagnosed in 1967. Vigorous efforts are being made by the American Cancer Society to alert the public to the dangers of cigarette smoking, but the consumption of cigarettes continues to rise.

The invention of a revolutionary new cigarette filter by the New Jersey chemist Robert L. Strickman was announced in 1967. This filter was reported to reduce the tar and nicotine content of cigarette smoke to less than one third the levels of conventional filters. This claim, however, was not yet supported by satisfactory scientific evidence, and the report was widely criticized for unjustifiably reassuring smokers that a filter would reduce the hazards of smoking. (See also SMOKING AND HEALTH.)

Cancer Research. The major approaches to cancer research are concerned with the search for viruses that may produce cancer in man, the attempt to identify specific antigenic substances in cancer cells, and the development of immunological methods that may contribute to the cure of cancer. The presence of herpeslike viruses in human leukemia cells grown in tissue culture was described by George E. Moore, director of Roswell Park Memorial Hospital in Buffalo. Similar viruses were also found in normal cells, and this particular virus has not been shown to produce any disease.

Other herpeslike viruses have been found in Burkitt lymphoma cells grown in tissue culture. Burkitt lymphoma, which occurs in Africa, may be due to a widespread endemic virus, although only in a few patients does it express itself by causing cancer. The unique nature of this disease is supported by evidence that about 15% of the patients are cured by anticancer drugs, a far higher cure rate than these drugs produce in related tumors in other parts of the world. There is also evidence that patients with Burkitt lymphoma may produce antibodies against antigens in these cells. Related antibodies have also been found in normal people living in the same region. Despite mounting evidence, however, a cancer-producing virus has not yet been implicated in any human cancer.

The search for specific antigens in cancer cells as a means of early diagnosis or as an approach to therapy has not been rewarding, but intensive research programs in this area are now in progress. The Rand Development Corporation of Cleveland introduced a cancer vaccine for clinical trials without satisfactory evidence to support its use, and an injunction was obtained by the Food and Drug Administration against shipping the drug in interstate commerce.

Cancer Diagnosis. The use of mammography, an X-ray technique for detecting abnormal growths in the breast, when combined with regular physical examinations, has increased the number of early diagnoses of breast cancer. This, in turn, has led to an increase in the cure rate of this type of cancer. The early diagnosis of bone cancer has been aided by a technique involving the administration of the radioisotopes fluorine-18 or strontium-85, and Elliott Osserman of the Columbia University College of Physicians and Surgeons in New York has demonstrated the presence of a high concentration of the enzyme lysozyme in the urine of patients with acute monocytic leukemia.

Incidence of Cancer. Except for lung and pancreatic cancer, the incidence of various forms of cancer in the United States appears to be stable when adjusted for age and population. J. F. Fraumeni and R. W. Miller presented data showing that leukemia, after increasing in incidence for the past 40 years, is declining; this is particularly notable in children, where the incidence decreased about 14% between the 5-year periods 1956–60 and 1961–65.

Cancer Therapy. Recent work at the Wadley Research Institute in Dallas and at the Sloan-Kettering Institute for Cancer Research in New York has shown that the bacterial enzyme L-asparaginase can produce a significant improvement in those leukemia patients whose leukemia cells require the amino acid L-asparagine for their growth. This amino acid is produced by normal cells and is not essential in the diet. If a leukemic cell is unable to produce L-asparagine, it must obtain the amino acid from normal cells. Thus, when L-asparaginase is given to a patient, it destroys the L-asparagine in the blood, causing the destruction of the leukemic cells. In some patients the enzyme can produce a temporary remission of the disease, but the percentage of responsive patients and the duration of the remission are not yet established because of the small quantities of the enzyme available.

In addition to L-asparaginase, other agents, such as methotrexate, produce temporary remissions in acute leukemia. In most patients, however, the leukemic cells become resistant to the drugs.

Support for Cancer Research. The U.S. Public Health Service had allocated $175,700,000 for cancer research in 1967, and this is expected to rise to $183,400,000 in 1968. In 1966–67 the American Cancer Society distributed $17,732,287.

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CENTRAL AMERICA. See LATIN AMERICA and the articles on Central American countries.

CENTRAL AFRICAN REPUBLIC

The year 1967 was a quiet one for the Central African Republic. The only political event of note was the reshuffle of the government by President Jean Bedel Bokassa during the early part of the year. In foreign affairs, relations with neighboring Sudan continued to improve.

Political Affairs. President Bokassa made several cabinet changes in January. He personally took over the interior portfolio and gave up the information and justice portfolios, while retaining that of defense. Former Foreign Minister Antoine Guimali was named minister of justice, and Jean Arthur Bandio, former interior minister, became foreign minister.

CENTRAL AFRICAN REPUBLIC • Information Highlights

ASIA
AFRICA

Area: 240,534 square miles (622,984 sq km).
Population: 1,437,000 (1966 midyear est.).
Chief City (1964 census): Bangui, the capital, 111,266.
Government: *President*—Col. Jean Bedel Bokassa (took power in military coup, Jan. 1, 1966); *Parliament*—National Assembly (dissolved Jan. 4, 1966).
Religious Faiths: Tribal religions, 60% of population; Protestant, 15%; Roman Catholic, 14%; others, 11%.
Education: *Total school enrollment* (1964)—124,057 (primary, 119,565; secondary, 3,662; teacher-training 459; technical, 371).
Finance (1966 est.): *Revenues,* $32,200,000; *expenditures,* $34,500,000; *monetary unit,* CFA franc (246.85 francs equal U. S.$1).
Gross National Product (1966 est.): $70,000,000.
Cost of Living Index (1966): 145 (1958=100).
Manufacturing (metric tons; 1965): Meat (1964), 12,000; beer, 9,900; lumber, 43,000 cubic meters.
Crops (metric tons, 1965): Cassava, 1,000,000; peanuts, 99,770; sweet potatoes and yams, 40,000; cottonseed (1966), 30,000; cotton lint (1966), 14,000.
Minerals (1965): Diamonds, 536,000 carats.
Foreign Trade (1966): *Exports,* $31,000,000 (chief exports, 1966: diamonds, $16,438,950; coffee, $7,281,900; raw cotton, $4,411,700; lumber (1965), $528,000); *imports,* $35,000,000 (chief imports, 1965: nonelectrical machinery, 2,837,000; woven cotton fabrics, $2,715,000; trucks and lorries, $2,130,000). *Chief trading partners* (1965): France (took 37% of exports, supplied 60% of imports); Israel (took 21% of exports); U. S. (took 13% of exports, supplied 5% of imports).
Transportation: *Roads* (1965), 11,325 miles (18,222 km); *motor vehicles* (1965), 9,532 (automobiles, 3,638); *principal airport,* Bangui.
Communications: *Telephones* (1966): 2,838; *radios* (1965), 30,000; *newspapers* (1962), 1 (daily circulation, 400).

In the wake of renewed political activity by members of the Mouvement d'Évolution Sociale de l'Afrique Noire (MESAN, the country's only legal party), President Bokassa assumed the post of secretary-general of the party.

Foreign Affairs. Relations with Sudan improved further with the conclusion of successful negotiations for the repatriation of about 37,000 Sudanese refugees in the Central African Republic. At the emergency session of the UN General Assembly on the Middle East crisis, the country followed the lead of many other African states by assuming a position of neutrality between the Arab and Israeli claims.

Economic Affairs. The year saw little improvement in the country's difficult economic situation. The 1967 budget showed a deficit of approximately 100 million CFA francs. This was much less than the originally projected 600 million deficit, but was, nevertheless, an indication of declining government revenues.

In an effort to improve its fiscal position, the government opened a national diamond office to control artisanal diamond mining, much of which had previously remained outside government supervision. With aid from the United Nations, France and the European Economic Community, construction was begun on a textile mill at Bangui, and a timber industry center was opened near Bangui.

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CATHOLIC CHURCH. See RELIGION—*Catholicism;* ROMAN CATHOLIC CHURCH.

CEYLON

Ceylon continued its struggle to achieve economic stability and growth amid disadvantageous world market conditions in 1967. Following Britain's devaluation of the pound, Ceylon devalued its currency by 20% on November 21. Prime Minister Dudley Senanayake's United National Party retained a safe majority in Parliament, but by-elections indicated public restlessness in the face of a faltering economy.

Economic Conditions and Policy. Sharp declines in export earnings yielded a trade deficit of $67 million for 1966. The international prices of tea, rubber, and coconuts continued to decline, with the price of tea taking the sharpest drop in 10 years. In spite of the difficulties, Finance Minister U. B. Wanninayake presented Parliament a budget providing for expenditures of 783 million rupees ($164 million), an all-time high for the country.

The government sought desperately to develop

CEYLON • Information Highlights

Area: 25,332 square miles (65,610 sq km).
Population: 11,500,000 (June 30, 1966, est.).
Chief Cities (1963 census): Colombo, the capital, 510,947; Jaffna, 94,248; Moratuwa, 77,632; Kandy, 67,768.
Government: *Governor-General*—William Gopallawa (took office March 2, 1962); *Prime Minister*—Dudley Senanayake (took office March 25, 1965). *Parliament*—House of Representatives (party seating, 1967: United National party, 66; Sri Lanka Freedom party, 41; Tamil Federal party, 14; others, 36); Senate, 30 members.
Religious Faiths: Buddhists, 64% of population; Hindus, 20%; Christians, 9%; Muslims, 7%.
Education: *Literacy rate* (1953), 68% of population aged 15 and over. *Total school enrollment* (1965)—2,598,067 (primary, 1,780,559; secondary, 817,508).
Finance (1966 est.): *Revenues,* $317,226,000; *expenditures,* $410,920,000; *net public debt* (1965), $772,500,000; *monetary unit,* rupee (4.7619 rupees equal U. S.$1; devalued Nov. 21, 1967, to 5.95 rupees equal U. S.$1).
Gross National Product (1966): $1,631,000,000.
National Income (1966): $1,452,300,000; average annual income per person, $127.
Economic Indexes (1965): *Industrial production,* 149 (1958=100); *agricultural production,* 137 (1956–57=100); *cost of living* (1966), 107 (1958=100).
Manufacturing (metric tons, 1965): Cement, 85,850; meat (1964), 18,000; sugar, 8,000; beer, 6,500.
Crops (metric tons, 1965–66 crop year): Tea, 222,015 (ranks 2d among world producers); rice, 1,054,000; cassava, 343,000; natural rubber (1966–67), 131,040.
Minerals (metric tons, 1965): Ilmenite, 49,200; salt, 77,200; graphite (exports), 8,820; glass sand, 7,100.
Foreign Trade (1966): *Exports,* $357,142,000 (chief exports 1965: tea, $253,107,180; rubber, $63,851,760; coconut oil, $29,916,810); *imports,* $426,050,000 (chief imports, 1965: rice, $30,328,620; wheatmeal and flour, $20,628,720; fruit and vegetables, $18,923,310). *Chief trading partners* (1965): Britain (took 25% of exports, supplied 17% of imports); Communist China (took 9% of exports, supplied 7% of imports).
Transportation: *Roads* (1965), 18,000 miles (28,962 km); *motor vehicles* (1965), 117,791 (automobiles, 82,400); *railways* (1965), 927 miles, 1,492 km).
Communications: *Telephones* (1966): 43,000; *radios* (1965), 438,000; *newspapers* (1965), 13 (daily circ. 440,000).

capital for diversified industrialization and to achieve greater self-sufficiency in agricultural production. In furthering long-range economic development, the government reduced by half the subsidized rice ration and imposed new taxes on various imports, especially tobacco. The outlook for increasing rice production appeared good. In 1967 the island's first steel rolling mill was opened, as was a new cement factory and a tire factory. Hardware production for domestic and export sale was in the initial stages, and work was begun on an oil refinery capable of fulfilling the country's requirements. Tourism was actively promoted, and the number of tourists increased by 27% during the first quarter.

Foreign companies continued to apply for investment rights, and among the applications approved by the government were those for a Japanese car assembly firm, and a U. S. company that will assemble and export Jeeps, in association with local investors.

Foreign Aid. Organized by the World Bank, a consortium of Western nations pledged to continue its $50-million-a-year foreign aid through 1967. This aid makes up for a substantial part of the export deficit. In addition, a $7.5 million U. S. loan agreement was signed in April, and the Soviet Union provided economic and technical aid by establishing the new steel and tire plants.

Indian Tamil Minority. In February, Parliament ratified an India-Ceylon Accord, which would grant Ceylonese citizenship to 300,000 of Ceylon's 975,000 Indian residents. Under the agreement, India would repatriate 525,000 of the minority group.

Political Affairs. Former Prime Minister Mrs. Sirimavo Bandaranaike, showing skill as an opposition leader, maintained close relationships with leftist groups. Despite reverses for the government party (UNP) in the by-elections, there seemed no likelihood of a national election before the present government's term expires in 1970.

In February, six persons accused of complicity in the 1966 attempt to overthrow the Senanayake government were released for lack of evidence. The case was continued for other defendants.

A parliamentary committee was established to consider making Ceylon a republic.

In May, U. S. President Lyndon B. Johnson appointed Andrew V. Corry, ambassador to Sierra Leone since 1964, ambassador to Ceylon and the Maldive Islands. Corry replaced Cecil B. Lyon.

BRYCE RYAN
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CHAD

In 1967, Chad was again forced to deal with several raids by rebels based in Sudan. By midyear, however, the resulting differences between the two neighboring countries appeared to have been successfully composed.

Internal Affairs. A continuing series of raids into Chadian territory by Sudan-based rebels was climaxed in July by a sharp encounter between government forces and the raiders. During this encounter the rebel leader Ibn Abatcha was killed. The government had held him responsible for the deaths in February of a deputy of the Chadian National Assembly and a prefect.

CHAD • Information Highlights

ASIA
AFRICA

Area: 495,752 square miles (1,284,000 sq km).
Population: 3,361,000 (July 1, 1966, est.).
Chief City: Fort-Lamy, the capital, 91,688 (1963 est.).
Government: *President*—François Tombalbaye (took office Aug. 12, 1960, for a 7-year term); *Parliament*—National Assembly, 75 members (all belonging to the Parti Progressiste Tchadien).
Religious Faiths: Muslims, 52% of population; Animists, 43%; Roman Catholics, 3%; Protestants, 2%.
Education: *Total school enrollment* (1964)—132,445 (primary, 128,031; secondary, 4,173; teacher-training, 241; technical, 403).
Finance (1965 est.): *Revenues*, $33,900,000; *expenditures* (1966), $42,500,000; *monetary unit*, CFA franc (246.85 francs equal U. S.$1).
Gross National Product (1966 est.): $245,000,000.
Cost of Living Index (1966): 159 (1958=100).
Crops (metric tons, 1965–66 crop year): Peanuts, 149,655; cottonseed (1966–67), 93,000; cotton lint, 38,000; dates, 18,300.
Minerals (metric tons, 1964): Natron, 6,757.
Foreign Trade (1966): *Exports*, $23,770,000 (chief export, 1965: cotton, $18,265,500); *imports*, $32,321,000 (chief imports, 1965: petroleum products, $6,330,150; textile yarns and fabrics, $3,495,150; nonelectrical machinery, $2,045,250). *Chief trading partners* (1965): France (took 47% of exports, supplied 46% of imports); Nigeria (took 11% of exports, supplied 2% of imports); Yugoslavia (took 12% of exports, supplied .07% of imports).
Transportation: *Roads* (1964), 8,072 miles (12,990 km); *motor vehicles* (1965), 8,663 (automobiles, 3,305); *principal airport*, Fort-Lamy.
Communications: *Telephones* (1966): 3,257; *radios*, 1964, 22,000; *newspapers* (1965), 1 (daily circulation, 1,500).

The ruling Parti Progressiste Tchadien (PPT) held its sixth congress, in January, in Fort-Lamy, the capital. President Hamani Diori of Niger, President Jean Bedel Bokassa of the Central African Republic, and delegations from several African and European states attended as special guests. Chadian President François Tombalbaye was reelected secretary-general of the party by acclamation. The 600 delegates at the congress stressed the theme that the struggle for power between the country's Muslim, Arab-oriented north and its black, Christian south had been reduced to a manageable level.

Foreign Affairs. During 1967, President Hamani Diori of Niger continued his attempts to mediate between Chad and Sudan in the dispute between the two states arising out of incidents along Chad's eastern frontier. In August, President Tombalbaye announced that President Diori's mediation had been successful and that the outstanding issues between the two countries were being resolved.

In May and June, Chad and the Soviet Union concluded a cultural exchange program involving sports and cultural and social activities. The two countries also signed a trade agreement, which provides for the Soviet Union to supply machinery, building materials, and consumer goods in exchange for Chadian cotton, groundnuts, and leather.

Foreign Aid. France, which continued to be Chad's principal foreign-aid donor, provided $959,000 in April for educational facilities. In May the European Development Fund agreed to lend Chad $1.8 million, as well as to make a grant of $900,000, to help stabilize Chadian cotton prices.

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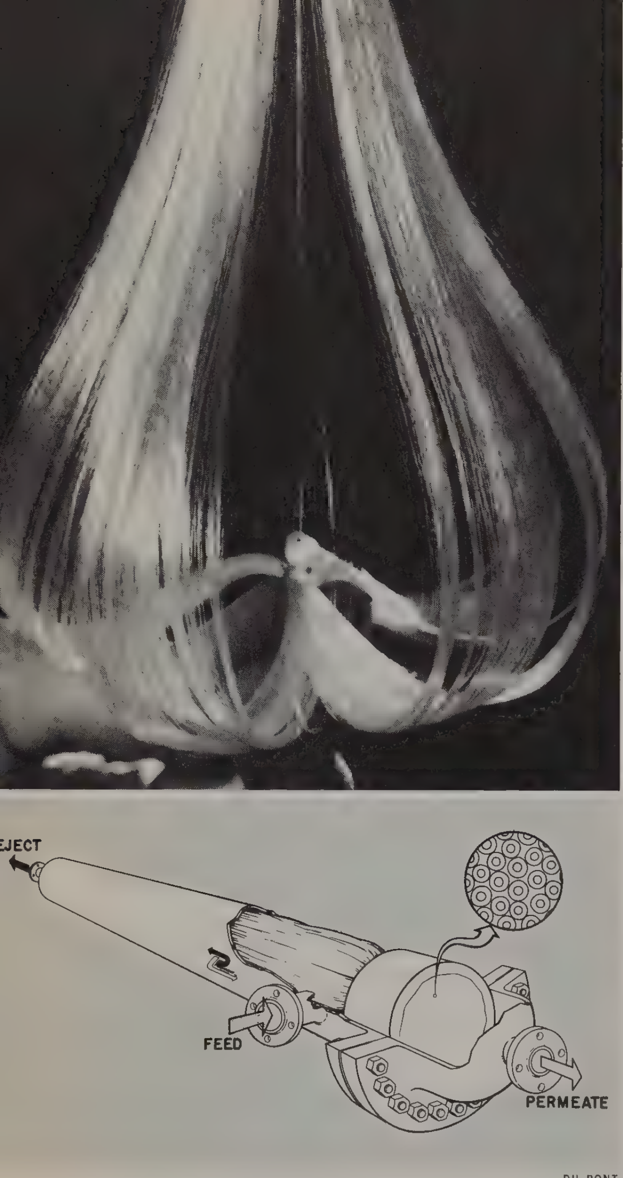


DU PONT

NEW DESALTING DEVICE has strands of hollow fibers (*top photo*) inside a sealed pipe. As salt water enters the pipe, the water portion is forced into the tubules and is drawn off at the end marked "permeate." The salt, which does not enter the tubules, is removed at the other end.

CHEMISTRY

Chemical developments in the news in 1967 included a new process for making steel and new processes for coating metals, studies of air and water pollution, new advances in desalting seawater, and new uses for plastics and synthetic rubber.

The Chemical Industries. The size and growth of the chemical process industries in the United States can be shown by estimates of the quantities of basic raw materials used in 1967. The two leading organic products made from these materials were synthetic plastics (7 million tons, 6.3 metric) and synthetic rubbers (2.2 million tons, 2 metric). About two-thirds of all plastics are represented by polyethylene, the styrenes, polyvinyl chloride, and the phenolics. Natural rubber consumption was about one-fifth of the synthetic elastomers.

MATERIALS USED BY U.S. PROCESS INDUSTRIES, 1967
Millions of tons

Raw material	(Short tons)	(Metric tons)
Metals		
Pig iron	100.0	90.0
Aluminum	3.5	3.17
Copper	1.5	1.36
Zinc, lead, manganese	1.1	1.0
Organic Materials		
Ethylene	6.0	5.4
Benzene	3.7	3.4
Propylene	3.4	3.1
Toluene	2.6	2.4
Xylenes	1.6	1.45
Inorganic Materials		
Sulfuric acid	28.7	26.0
Ammonia	12.2	11.1
Caustic soda	8.4	7.6
Chlorine	7.2	6.5
Soda ash	7.1	6.4
Nitric acid	5.9	5.4
Hydrochloric acid	1.7	1.5

Metals. The U. S. steel industry, the world's largest, is watching with great interest a "spray steel-making" process that is being developed in England as a competitor of the basic oxygen furnace, now in very general use in the industry. Following a successful pilot-plant operation, a full-scale furnace, with the addition of one-third molten scrap, has been in operation for a year, and another, using blast furnace material, is being brought up to continuous use. The molten iron is atomized by a ring of oxygen jets to burn out unwanted impurities, and lime and fluxes are added through nozzles. The product runs to a ladle, from which the slag is skimmed. (See also STEEL.)

An electrolytic process, known as metallidizing, that depends on the passing of direct current through molten fluoride salts of as many as 50 different elements has been developed. The process results in the deposition of ions from anode material on the surface of a metal or alloy to the depth of several mils, with the formation of an extremely hard surface resembling that of a carbide. Boron diffused into steel gives the surface a hardness even greater than a carbide; silicon into aluminum produces a material second in hardness only to diamond; and aluminum alloyed into titanium gives the product greater rigidity and oxidation resistance.

Relatively pure and thick coatings of nickel may be applied to brass or steel without the use of an electric current by the inclusion of hydrazine (NH_2NH_2) in the solution. The coating adheres, but requires heat treatment to avoid brittleness. A thickness of .01 inch (.025 centimeters) may be secured with a purity of 90% and these values are not reached by other electroless methods. Corrosion resistance, however, is somewhat inferior to conventional electroless coatings that are more brittle.

Nuclear Materials. Zirconium as a cladding metal for enriched-uranium fuel rods in atomic power units was being produced in 1967 to the extent of 1,250 tons (1,140 metric tons) per year, as compared with half this amount in the preceding year. This metal is much superior to stainless steel for this application because of its high resistance to a steam environment at 600° F (315.5° C) and its low cross-section to thermal neutrons, allowing them to pass through safely, so that no plant using steel is being planned. The high price of zirconium, however, confines its use to atomic power.

By addition of boric acid to the hydrochloric acid commonly used in recovery of uranium from zirconium-clad fuel elements, the danger of an uncontrolled nuclear reaction is removed and the capacity of the recovery process may be increased from 2 to 20 pounds (0.9 kilograms to 9 kilograms) per day. A nuclear power plant in Idaho that uses this process is probably the only one with the recovery of larger-than-critical masses of uranium.

Twenty six central-station nuclear plants, purchased in 1966, represent about one half of all new steam-electric additions for 1967. Fueling with nuclear materials will cost around $75 million, but within five years core materials costs will be about four times as great. Recovery of plutonium and important isotopes will be important sources of revenue for these plants.

Inorganic Chemicals. A combined industry-government effort was required in 1918 to supply 200,000 cu. ft. (about 6,000 cu. meters) of helium for dirigibles during World War I. Although lighter-than-air applications account for only 5%, the present figure for helium sales is of the order of one billion cu. ft. (20 million cu. meters). Only 3% of the supply of this element is in the form of liquid helium. The present space program requires 60% of the helium supply, mainly for pressurizing liquid-fueled rockets. However, helium is also used along with argon in the welding of aluminum, stainless steel, and titanium and it plays an important part in the growing of silicon and germanium crystals. Since helium passes through orifices that will not pass air, it is useful in testing for leaks in pressure equipment. Liquid helium may have much wider applications in superconducting industries, even to the extent of power transmission lines carrying high voltages without loss. The U. S. Bureau of Mines has over 13 billion cu. ft. (370 million cu. meters) of helium in reservoirs that have an ultimate capacity of over 41 billion cu. ft. (1.2 billion cu. meters).

Present yearly capacity of industrial ozone is of the order of 12 million pounds (5,400 metric tons), but this figure is expected to double by 1968. Modern equipment for its production costs about 40% of what it did in 1964 and has a higher efficiency. Many of the applications of ozone in the chemical industries are kept secret, but users operating with vegetable oils have announced the use of ozone in making commercial acids and other chemical intermediates. Although use in water treatment and odor control is less than in chemical industries, ozone consumption is growing rapidly. This is particularly true in reducing odors that are harmless but unpleasant and are associated in the public mind with atmospheric pollutants that actually do constitute a menace to property and health.

Sulfur stocks have been reduced to the lowest point since 1952, and the price has risen sharply. As a result, new production is being greatly stimulated. Two new offshore plants are being built and previously mined sites, both inland and under shallow water, are being reopened. It is thus expected that sulfur production will go ahead of demand by as much as 2 million tons (1.8 million metric tons) by 1968. Sulfur from "sour" natural gas is being imported from Canada by the United States at nearly half that of domestic rates.

Sulfur dioxide from the roasters of a 450-ton (408 metric tons) per day zinc concentrate, together with additional sulfur, is producing 1,200 tons (1,088 metric tons) per day of concentrated sulfuric acid in an Illinois plant. The acid will be used by the same company in the manufacture of diammonium phosphate fertilizer. This is an example of processes that, singly, produce atmospheric pollution, but, in combination, avoid this problem.

Basic oxygen furnaces are now accounting for 25% of steel ingots, and the process is growing rapidly toward a figure of 50%. Most of the gas escaping is carbon monoxide. One steel company is making progress in the recovery of this gas, which is a raw material in the petrochemical industry. If all steel in North America were made by the basic oxygen process, the annual yield of carbon monoxide would provide 15 billion pounds (6,795,000 metric tons) of this petrochemical raw material.

Deposits of trona (sodium sesquicarbonate) in the Green River region of Wyoming, are said to be sufficient to supply the world's needs for soda ash for 300 years. These deposits were laid down around 50 million years ago by the evaporation of a lake, and are now mined at a depth of 1500 feet (450 meters). New plants are being built for processing these deposits, so that they will supply more than one fourth of the market for sodium carbonate. The material is of exceptional purity, particularly with very low concentrations of iron and chlorides.

Air and Water Pollution. Prevention of air pollution is based on partial removal of sulfur from fuels. Contaminants must be prevented from reaching streams in amounts that constitute a hazard to public health. Undesirable compounds, mainly sodium chloride, must be removed from water supplies.

Detergents constitute the main chemical weapon in the removal of crude oil from contaminated beaches. The type used in greatest volume is a kerosene derivative that produces an emulsion that stays in sea water. Wave action prevents effective burning after 40 minutes. The ultimate goal for prevention of water pollution is repeated reuse. While from 75% to 90% of oxygen-consuming and suspended materials are removed from water by municipal treatment, only a small amount of dissolved inorganic compounds are taken out. (See also POLLUTION.)

Desalting Projects. In 1968 the world's largest desalting plant is expected to be completed in Mexico, at Rosarito, Baja California Norte. The capacity of this plant is 7.5 million gallons (28.4 million liters) of fresh water per day. The equipment includes two very large, long-tube, flash evaporators, receiving the exhaust from a neighboring 225-megawatt thermal power plant. The cost of production is estimated to be 65¢ per 1,000 gallons (3,800 liters). This low cost is made possible by the use of a power plant and a continuous scale-control system.

A large chemical firm has announced a "reverse-osmosis" process for removal of salt from sea water. Ordinary osmosis depends on the passage of water through a semipermeable membrane from a dilute to a concentrated solution. By applying high pressure on a saline solution, salt is restrained at the membrane, and pure water passes through. A radically new membrane that shows great promise consists of a large number of very fine plastic tubes held in a sealed pipe immersed in salt water. Fresh water is drawn from the tubes as pressure is applied on the saline solution.

Organic Chemicals. A recent laboratory experiment carried out by the U. S. Bureau of Mines may have future applications in the chemical uses of coal. A 2- to 10-joule laser source, focused on coal, is said to have generated temperatures higher than 1000° F, with immediate release of chemical compounds, and with a vaporization of 60% of the sample. The gas evolved contained 25% acetylene, together with smaller amounts of divinyl acetylene, hydrogen cyanide, ethylene, and ethane.

Cryogenic liquid methane is being proposed as a replacement of kerosene as a fuel for supersonic jet transports, with an improvement of aircraft performance of 31% and a 36% reduction in operating costs. Methane has a higher heat of combustion and greater cooling capacity. Other advantages include elimination of the smoke, coke, and lacquer that cause plugging of fuel systems.

In order that fertilizers may be completely effective in underdeveloped nations, they should be accompanied by weed-killers. A large part of these are organic compounds derived from petroleum. Recent tests with some Chilean crops have shown that the use of herbicides accounted for an increase in crop yields of 25%.

Synthetic Rubbers and Plastics. A recent entry in the synthetic rubber field is known as EPDM (ethylene propylene diene monomer). It is used primarily in mechanical goods, such as hoses, weather stripping, and appliances. It has superior resistance to ozone, age, and chemicals and is relatively cheap. So far it is not comparable in quality with tire rubbers, but it releases them for the tire industry by replacing them in these other uses.

Many rubber-lined reservoirs are now in use to hold brines for salt manufacture or to serve as catch basins to prevent pollution of rivers. Brines from underground caverns are being stored in New Jersey, in the world's largest rubber-lined lake, which has an area of about 17 acres (6.9 hectares) and holds 84 million gallons (318 million liters). An emergency catch basin, connected by a 10-mile (16 km) pipeline to the Atlantic Ocean, has an acreage of 13.5. One square yard of rubber, with a thickness of ⅛ inch, will allow the passage of only 1 pint of water in ten years, as compared with a square yard of concrete, 1 inch thick, and which will pass 70 gallons of water during this same period. (This is roughly equivalent to a square meter of 0.3 centimeter-thick rubber passing half a liter of water while a square meter of concrete, 2.5 centimeters thick, passes about 250 liters.) Rolls of lining rubber are available that are 20 ft. (6.1 meters) wide and 200 ft. (60.8 meters) long. This material operates at ambient temperatures between −66° F (−54° C) and 300° F (150° C).

A new type of acrylonitrile-butadiene-styrene resin permits stamping or cold-drawing without heat, thus putting this material into competition with metals in the food-container, automotive-parts, and appliance industries. Heretofore, thermoforming was required in the fabrication of plastics. Text or decorations may be preprinted before articles are formed. So far, cold-forming has been limited to ¼-inch sheets.

Plastics appear to have a large part in reducing the cost of residential construction, and, particularly in slum rehabilitation. Plastic piping is much lighter than other materials, and has superior properties. Plastics also function in roofs, siding, and floors. New building codes are being based on the use of plastics in construction. A demonstration recently in New York showed an entire section of an old tenement replaced by a new section with vinyl flooring and urethane wallboards. (See also PLASTICS.)

W. T. READ
Consulting Chemist

CHESS. See SPORTS.

CHIANG KAI-SHEK. See biographical sketch under CHINA.

CHICAGO

Civil rights activities, a surprisingly small number of racial disturbances, and violent weather were some of the noteworthy events in 1967 in Chicago (1966 est. city pop., 3,532,652; 1967 est. metropolitan pop., 7,553,300).

Civil Rights. Martin Luther King, Jr., announced plans on March 23 to continue demonstrations in Chicago during the summer. He said that improvement in conditions for the city's Negroes was negligible and that an open housing agreement initiated in 1966 was only "a marvelous agreement on paper." In a speech delivered on April 16, King warned that Chicago could easily explode into racial violence during the summer.

Although there were scattered incidents of violence in 1967, the disturbances never approached the proportions of the previous year's riots on Chicago's West Side. Ten persons were reported injured, and 30 were arrested when police and Negroes clashed on May 21, following a memorial service for the late Black Nationalist leader Malcolm X. Scattered vandalism, fire bombings, and looting broke out on Chicago's South and West sides from July 26 to August 1. Two persons died of bullet wounds in the violence, and at least 120 persons were arrested. At a July 27 news conference Chicago Mayor Richard J. Daley threatened to call in the National Guard. This never became necessary, although certain sections of the city were temporarily sealed off and taverns were closed. There were no major incidents in the city during the remainder of the summer, but some disturbances did break out near Chicago in September. In November, 11 persons were injured and 60 were arrested when racial violence broke out at three city high schools. (See also ILLINOIS.)

Weather. Record snow- and ice-storms accompanied by winds of up to 53 mph hit Chicago on January 26–27. The city was paralyzed by a snowfall of 23 inches in 26 hours, Chicago's worst snowstorm since 1939. Mail deliveries, food shipments, and public services were halted, and the city's schools remained closed for several days. Additional snowstorms reached Chicago on January 29, February 1, and February 5–6, bringing the 12-day total to a record 37 inches.

On April 21 a series of tornadoes swept through the Chicago metropolitan area, killing 55 persons and destroying 484 homes.

Labor Disputes. In January, through mediation conducted by Mayor Daley, contract settlements were reached with the Chicago Teachers Union and the Cook County College Teachers Union, thus averting protracted teacher strikes against Chicago schools and junior colleges. Both unions are affiliates of the American Federation of Teachers.

A strike by a Chicago local of the Milk Wagon Drivers Union was settled on May 3. Chicago area Teamster locals went back to work the next day, after a contract was renegotiated with the International Brotherhood of Teamsters.

Murder Conviction. On April 15, Richard Speck was convicted in Peoria, Ill., of the murder of eight student nurses in Chicago on July 14, 1966. The jury recommended the death penalty. The trial had been transferred from Chicago to Peoria on Dec. 19, 1966, after Speck's attorney claimed that his client could not receive a fair trial in Chicago.

Daley Reelected. Mayor Richard J. Daley, a Democrat, was reelected on April 4 to a fourth term. The

WIDE WORLD

CHICAGO traffic was at a standstill two days after a heavy snowstorm of 23 inches in 26 hours (the city's worst since 1939). The storm began on Jan. 26, 1967.

64-year-old Daley received 72.8% of the vote to defeat Republican John L. Waner, a Polish-American heating contractor, who received 25.5% of the vote, and two write-in candidates.

Chicago's Picasso. A sculpture designed by Pablo Picasso was unveiled on August 15 in the plaza of the Chicago Civic Center before 50,000 people. Picasso made a gift of the design to the people of Chicago after he had been commissioned by the architects of the Civic Center. The $300,000 all-steel structure stands 50 feet high and weighs 163 tons.

Education. James F. Redmond, who took over as school superintendent in 1966, proposed a broad plan for integrating and improving Chicago public schools. Among Redmond's proposals are the busing of Negro children to white schools, the establishment of incentives to bring experienced teachers into the inner-city schools, and the improvement of vocational education. The board of education approved the plan in August, but cost factors have delayed setting a date for implementation.

Economic Statistics. For the first seven months of 1967, investment in Chicago's industrial plants totaled $599,466,000, a 79.8% increase over the same period in 1966. Steel production reached 13,584,000 tons through July 1967, and building permits issued for the same period totaled 7,890.

SAMUEL K. GOVE
University of Illinois

CHICHESTER, Sir Francis. See biographical sketch under BOATING.

RICHARD J. DALEY, mayor of Chicago since 1955, was reelected by a large majority on April 4, 1967. After racial violence on Chicago's West Side had been quelled by the Illinois National Guard in July 1966, Daley met with the Rev. Martin Luther King, Jr. and reached an agreement with him on a 4-point program for improvement of conditions in the city's Negro community. In 1967 he mediated teachers' and truckers' disputes.

Daley was born on May 15, 1902, on the West Side of Chicago, where he sold newspapers as a boy. He obtained his LL.B. degree from De Paul University in 1933 and was admitted to the bar in the same year. An active Democrat, he served in the Illinois House of Representatives (1936–38) and in the state senate (1939–46) and was appointed state director of revenue in 1948. He served as clerk of Cook county from 1950 to 1955.

CHICAGO'S MAYOR Richard J. Daley and his wife are shown at the polls on April 4, the day of his reelection.

UPI

UPI

(*Left*) A mother and her child await their turn at a children's clinic in Telsizler, a village in Turkey.

UPI

(*Right*) A mother of the Karamoja tribe in Uganda takes her baby to one of Uganda's rural health centers.

CHILD WELFARE

Child welfare activity in the United States in 1967 was marked by a reorganization of the federal Welfare Administration, with added responsibilities for the Children's Bureau; organized protests by many welfare recipients; and limitations on federal funding for aid to families with dependent children. Congressional concern over President Johnson's demand for a tax increase, and the rising costs of the war in Vietnam, brought about a serious challenge to many federal welfare programs.

Federal Child Welfare Services. In Social Security amendments passed by Congress in 1967, federal participation in the Aid to Families with Dependent Children program (AFDC) was limited to the proportion of the child population under age 18 in the state receiving aid because of absence of a parent as of Jan. 1, 1968. After June 30, 1968, federal funds will not be available to the states for any additional number of children requiring financial assistance. Were the number of AFDC applicants of a state to rise in proportion to its total child population, the state either would have to deny benefits to new applicants or pay the total benefits itself, at costs estimated, for some states, at tens of millions of dollars. Although the President signed the Amendments on Jan. 1, 1968, he called the restrictions "severe" and directed the Department of Health, Education, and Welfare to "work with state governments" to protect needy mothers and children.

In a more positive move, Congress increased the authorization for child welfare programs for fiscal 1969 from $55 million to $100 million.

In contrast to the tightening of provisions for eligibility by Congress were organized protests on the part of welfare recipients. The demonstrations spotlighted unrealistic levels of welfare payments and the enormous needs of the dependent families. As of July 1967, 1,212,000 families including 3,745,000 children were receiving funds under Aid to Families with Dependent Children.

At the end of March 1966, 741,400 children were receiving services from public and voluntary child welfare agencies. Many of these children were not living in the homes of their parents or relatives. Approximately 30% were in foster homes, 14% in institutions, and 10% in adoptive homes. Children living with their families accounted for 44% of the total, with 2% listed as "other."

Reorganization. A reorganization affecting services to children was under way during 1967 in the Department of Health, Education, and Welfare. The Welfare Administration, containing the Children's Bureau and the Bureau of Family Services, which includes AFDC, was replaced by the Social and Rehabilitation Service. This new agency includes Vocational Rehabilitation, the Children's Bureau, the Administration on Aging, the Medical Services Administration, and the Assistance Payments Administration.

The Children's Bureau was given extended responsibilities for studies and investigations on the status of children, for federal-state child welfare and maternal and child health programs, for programs for prevention of juvenile delinquency, for support of health services for school children, and for family and child welfare services.

Personnel Training. One of the continuing problems for both public and private agencies offering child welfare services is the shortage of trained personnel. The Children's Bureau provided $5.5 million in child welfare training grants in fiscal 1967 under a program authorized by the 1962 public welfare amendments to the Social Security Act. These grants included 741 graduate study programs leading to a master's degree in social work, scholarships for 47 students doing work beyond the master's level, and teaching grants to 68 schools of social work for the purpose of hiring 171 faculty members. In addition, subsidies were granted to 22 short-term training projects, including seminars and workshops.

State Committees. One type of organization serving children that is a phenomenon of the last 20 years and is still growing in strength is the governor-appointed state committee for children and youth.

Improvements in many areas affecting the welfare of the children of the United States have been made by these state committees. Along with 500 voluntary professional and lay organizations concerned with children and youth, these committees work with the National Committee for Children and Youth, an outgrowth of the 1960 White House Conference on Children and Youth. The state committees have provided continuing statewide leadership in improving services, including programs in day care and control of child abuse, as well as services for mentally retarded or emotionally disturbed children. With planning under way for a 1970 White House

Conference on Children and Youth, the committees were preparing in 1967 for a bold attack on the complex problems that will face the nation's children and youth in the 1970's.

Voluntary Organizations. In spite of the continuing proliferation of government programs, voluntary agencies remained important in 1967. More and more, a complementary relationship has developed, in which government agencies and voluntary organizations work together to accomplish common objectives. Many of the programs financed by the Office of Economic Opportunity have encouraged the involvement of voluntary community organizations. Other federal agencies look to voluntary organizations to develop demonstration programs, design needed research projects, and help the government bring about change in outdated approaches to persistent problems. Government funds allow for experimentation, and the implementation of useful but difficult ideas, which would otherwise be too costly for private agencies to put into effect.

Secretary of Health, Education, and Welfare John W. Gardner discussed the "emergence of these partnerships between the federal government, on the one hand, and the state and local governments and nongovernmental agencies, on the other. The formation and continuing development of these partnerships have profound implications for the way we organize our society and govern ourselves in the years ahead."

Mental Retardation. In its first report, submitted June 30, 1967, the President's Committee on Mental Retardation stated that it had "charted the progress made . . . and identified directions in which that effort must move . . . ." Among the 10 urgent requirements outlined in the committee report were many more available services, extensive manpower recruitment and training for work with the retarded, and more public-private partnerships in program development, services, and research. The committee predicted that "some 2,100 children who are or will become mentally retarded will be born every week in 1968."

UNICEF. At the annual meeting of the executive board of the United Nations Children's Fund, held in June 1967, a major item of business was a review of UNICEF assistance policies. The board agreed that the situation of children in the developing countries should be viewed with an increasing sense of urgency. The aims of UNICEF, claimed the board, could best be furthered by policies and programs that not only contribute to immediate benefits for children but also affect the long-range economic and social development of the countries involved. The board also agreed that aid should have a "multiplier" effect, with UNICEF acting as a catalytic agent to attract additional resources for children, and that the matching-fund principle in financing UNICEF aid must be maintained.

Total allocations for UNICEF programs in 1967 were $41.7 million. The largest share of the allocations, $20 million, went to programs in health services and disease control. Also in the field of health, the board came to a policy decision regarding UNICEF's role in family planning, stating that UNICEF can provide aid in this field as an integral part of its health services for mothers and children.

Nutrition programs received 13% of the 1967 allocations. Over two thirds of these allocations went to projects in applied nutrition for the rural family. Such projects aimed at raising the nutritional level of the diets of mothers and children by combining nutrition education and training with increased local production of healthful foods.

Assistance to programs in education and vocational training, started only in 1961, has become the second largest area of UNICEF aid. The major emphasis in these projects is on teacher training and improved supervision of teaching. Projects also reflect the concern of developing countries for improved science teaching in the elementary schools, practical education, nutrition and health education, and the production of teaching aids and textbooks. An allocation of $3 million went toward assistance in local production of manuals and textbooks.

While supplies and equipment have traditionally been the major form of UNICEF aid, another important area of assistance is in the training of local personnel. Nearly one third of program allocations in 1967 took the form of stipends and other aids for training, indicating the high priority which governments are placing on the improvement of training facilities. By the end of 1966, UNICEF had assisted in the training of over 220,000 workers.

ISABELLA J. JONES
National Committee for Children and Youth

CHILDREN'S LITERATURE

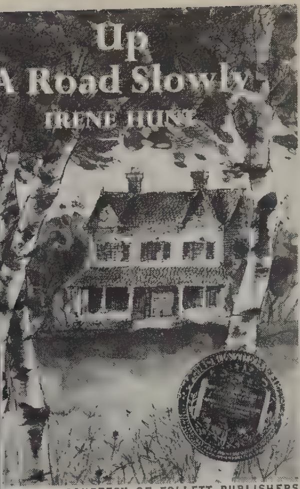
Early estimates placed the number of children's books published in the United States in 1967 at about 2,800, approximately the same amount as in 1966. The presence of federal funds available to schools and libraries under the Elementary and Secondary Education Act, experts agreed, seemed to result in a substantial number of mediocre texts. Paperback publishing continued to expand, with many excellent titles, such as E. B. White's *Stuart Little* and *Charlotte's Web,* appearing in paper covers for the first time.

Prevalent among the types of books published for children in 1967 were works for beginners with themes of peace between men and nations, and works dealing with the history of Russia and its literature, such as *A Harvest of Russian Children's Literature,* edited by Miriam Morton. Also in abundance were facsimile editions and reissues of old classics, volumes of individual Mother Goose rhymes, and books featuring Doctor Dolittle, prompted by the new motion picture *Doctor Dolittle.*

Awards. Among awards presented in 1967 for children's literature published during the previous year, the American Library Association (ALA) John Newbery Medal for the most distinguished contribution to children's literature went to Irene Hunt for her novel *Up a Road Slowly.* The ALA's Randolph Caldecott Medal for the most distinguished picture book went to Evaline Ness, author and illustrator of *Sam, Bangs & Moonshine.* Robert Burch's *Queenie Peavy* received the Child Study Association of America's award as the best book dealing with contemporary problems of young people.

Fiction. The most widely discussed children's book of 1967 was Maurice Sendak's *Higglety Pigglety Pop! or There Must Be More to Life,* a fantasy about a sealyham terrier's quest to star in "The World Mother Goose Theatre." All critics agreed on the excellence of the book and its finely etched illustrations, and the New York *Times* praised Sendak for erasing the barriers between adult and juvenile literature.

There were a number of noteworthy picture books in the 4-to-7 age category published in 1967.



COURTESY OF FOLLETT PUBLISHERS

IRENE HUNT was awarded the Newbery Medal for distinguished children's literature for her *Up a Road Slowly.*

SAM,
BANGS
&
MOONSHINE
WRITTEN AND ILLUSTRATED BY EVALIN
NE

COURTESY OF HOLT, RINEHART AND WINSTON

EVALINE NESS is the author and illustrator of *Sam, Bangs & Moonshine,* which was awarded the 1967 Caldecott Medal.

One Monday Morning, by Uri Shulevitz, is a colorfully illustrated bit of make-believe set against the drab background of tenement life; *Potatoes Potatoes,* by Anita Lobel, tells of two brothers who join opposing armies; and *Seashore Story,* by Taro Yashima, is a beautifully recounted Japanese legend. Among volumes of fantasy were *The World in the Candy Egg,* written by Alvin Tresselt and illustrated by Roger Duvoisin; and *Frederick,* written and illustrated by Leo Lionni.

Poetry for the very young included *To Market! To Market!,* a selection of pastoral rhymes from Mother Goose, and *Drummer Hoff,* an old folk verse, adapted and illustrated by Barbara and Ed Emberley. For slightly older readers—ages 5 to 7—*The Honeybees* has a poetic yet scientific text by Franklin Russell, with illustrations by Colette Portal.

Isaac Bashevis Singer wrote two of the outstanding books for children in the 6-to-9 age category. *Mazel and Shlimazel or The Milk of a Lioness,* illustrated with wit and pageantry by Margot Zemach, concerns man's constant companions, the spirits of good and bad luck, and *The Fearsome Inn,* handsomely illustrated by Nonny Hogrogian, describes the devil's battle for possession of the souls of three travelers. Also worthy are Ellen Raskin's *Silly Songs and Sad* and Jeffrey Baker's *Patterns of Nature.*

Many of the outstanding books for children between the ages of 9 and 12 dealt with the problems and concerns of preadolescents. *Ellen Grae,* by Vera and Bill Cleaver, is a perceptive story of a tomboy battling with her conscience; *My Brother Stevie,* by Eleanor Clymer, tells of a girl's concern for her younger brother; and *How Many Miles to Babylon?,* by Paula Fox, is about a lonely Negro boy. *The Cricket Winter,* by Felice Holman, is a delicate fantasy about a boy and a cricket.

A number of outstanding books in the 10-to-14 age category dealt with various aspects of war. John Tunis' *His Enemy, His Friend* is about a former German soldier in post-World War II France; Erik Christian Haugaard's *The Little Fishes* describes the miseries of war-torn Italy; and Elizabeth Janeway's *Ivanov Seven* tells of a young recruit in the czar's artillery. Russian soldiers are also described in *Fierce and Gentle Warriors,* a trio of stories by the Russian Nobel Prize winner Mikhail Sholokhov. Also noteworthy are Scott O'Dell's *The Black Pearl,* about a pearl diver; Robert Lipsyte's *The Contender,* about a young Harlem school dropout; and Syd Hoff's *Irving and Me,* which tells of an adolescent boy.

In teenage fiction, many of the outstanding volumes contained realistic studies of teenagers. *Too Bad About the Haines Girl,* by Zoa Sherburne, deals with the painful realities faced by a teenage girl who finds herself pregnant and unmarried; *The Outsiders,* by S. E. Hinton, is a teenage author's account of gang rivalry in Oklahoma; and *Haunted Summer,* by Hope Dahle Jordan, tells of a girl's ordeal of guilt and fear after a hit-and-run accident. Other noteworthy volumes were *Earthfasts,* by William Mayne, and the prose anthology *Golden Shore.*

History. The two best volumes of history for children in 1967 were written by Robert Goldston. *The Life and Death of Nazi Germany* is a brilliantly compressed study of the Nazi era, and *The Rise of Red China* is a judicious and intelligent survey of Communist China.

Biography. Outstanding among biographies is *Journey Toward Freedom,* Jacqueline Bernard's book on Sojourner Truth, the former slave who became a crusader for female, and Negro, emancipation.

Poetry. The most distinguished volume of poetry for children published in 1967 was the anthology of modern verse *Reflections on a Gift of Watermelon Pickle,* compiled by Stephen Dunning, Edward Lueders, and Hugh Smith. The book is notable for its crisp, clear imagery and its excellent illustrations.

George A. Woods
Editor, Children's Books
The New York "Times"

CHILE

President Eduardo Frei Montalva of Chile and his governing Christian Democratic party met with a series of embarrassments and defeats in 1967. However, President Frei did manage to put through a long-awaited land reform bill.

Politics. On January 17 the opposition parties of the Chilean Senate combined, in a vote of 23 to 15, to deny President Frei's request to visit, as planned, President Johnson in the United States. Such Senate permission is usually considered a mere formality. After an embarrassing cancellation of his visit, President Frei sought a constitutional amendment permitting him to dissolve Congress and hold new elections. However, this measure, too, was defeated in the Senate.

The opposition to President Frei sprung from many sources. The rightist Nationalist party feared the economic effects of Frei's program of rapid social and economic reform on the privileged status of its wealthy supporters. The Radical party, a moderate group, feared that the Christian Democrats were sapping its strength at the polls. On the left, the Popular Action Front, an alliance of the Socialist and Communist parties, was opposed to Frei because he had defeated its presidential candidate, Salvador Allende (now president of the Senate) in 1964, thereby gaining control of and credit for the social reform issue.

Nationwide elections of 276 municipal councils on April 2, which had been looked to by the Christian Democrats as an indicator of their popularity, yielded disappointing results for the government. Out of 2.4 million votes cast, the ruling party received only 36.5% of the total, compared with 42.3% in 1965. The parties that gained the most in comparison with 1965 were the Socialist and Communist parties, with 14.6% and 15% of the total votes, respectively. However, the Radical party came in second in the balloting, with 16% of the votes. Reasons ascribed for the decline of government popularity in the last two years were resentment by workers of wage controls, by the middle class of higher taxes and living costs, and by landowners of agrarian reform programs.

Frei suffered a further setback on December 17, when a Radical, Alberto Baltra Cortés, won a special election to fill the Senate seat vacated by the death of a Christian Democrat. On Jan. 7, 1968, however, Frei won a vote of confidence from the Christian Democrats and thereby regained party control from a leftist directorate that had ruled since June.

Latin American Solidarity Organization. In an apparent effort to broaden its appeal to the left, the National Council of the Christian Democratic party passed a declaration on July 11 condoning guerrilla warfare against regimes that "ignore the people's rights and offer no electoral solutions." The Council specifically mentioned the Castroite Latin American Solidarity Organization (LASO) as being legal in Chile (as long as it did not revolt against the government). LASO had engaged in subversive activities against several Latin American governments. The proclamation was generally very poorly received, and there were sharp protests from the governments of Colombia, Venezuela, and Guatemala. A censure motion by the Nationalists on July 26 against Salvador Allende, for his double role as Senate president and head of LASO in Chile, was defeated because of Christian Democratic abstention on the vote.

The government's position shifted somewhat after July 27, when arms and police reinforcements were moved into southern Chile as a result of bombing incidents and reports of guerrilla activities. On September 13, Chile officially condemned Cuban intervention in South America, and announced the formation of a committee to block subversion.

Strike. A general labor strike on November 23 caused five deaths and led to arrests of several union leaders. The strike was called by a leftist labor organization to protest a government plan for a national development fund to be built from compulsory deductions from workers' wages.

Economic Affairs. The major accomplishment of President Frei in 1967 was the passage, on July 16, of the Agrarian Reform Law that he had long sought. The law was expected to allow for the distribution of 15 million acres of land to 100,000 landless farm families within a few years. By the midpoint in his 6-year term, Frei had raised per capita income 40%. He had introduced an anti-inflationary plan for a national development fund, and he had plans to build 360,000 new housing units by 1970.

In 1967 the Inter-American Bank made loans of $20 million to Chile, and France agreed to supply Chile with an atomic research reactor.

Frank M. Lewis
University of Toledo

CHILE • Information Highlights

SOUTH AMERICA
AFRICA

Area: 292,256 square miles (756,945 sq km).
Population: 8,750,000 (1966 midyear UN est.).
Chief Cities (1965 est.): Santiago, the capital (metropolitan area), 2,248,378; Valparaíso, 276,330; Concepción, 174,224.
Government: *President*—Eduardo Frei Montalva (took office Nov. 3, 1964, for 6-year term). *Congress*—Chamber of Deputies, 147 members (party seating, 1966: Christian Democrats, 82; Radicals, 20; Communists, 18; Socialists, 15; Liberals, 6; others, 6); Senate, 45 members (party seating, 1966: Christian Democrats, 13; Radicals, 9; Socialists, 7; Communists, 6; Liberals, 5; others, 5).
Religious Faiths: Roman Catholics, 89.5% of population.
Education: *Literacy rate* (1960), 84% of population aged 15 and over. *Total school enrollment* (1964)—1,729,162 (primary, 1,350,142; secondary, 197,628; teacher-training, 9,586; technical, 135,303; higher, 36,503).
Finance (1966 est.): *Revenues*, $1,936,000,000; *expenditures*, $2,103,000,000; *public debt*, $167,000,000; *monetary unit*, escudo (4.37 escudos equal U. S.$1).
Gross National Product (1965): $5,889,000,000.
National Income (1965): $4,427,000,000; average annual income per person, $515.
Economic Indexes (1966): *Industrial (manufacturing) production*, 164 (1958=100); *mining production*, 151 (1958=100); *cost of living*, 632 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,368,000; gasoline (1965), 789,000; wheat flour, 781,200; crude steel, 540,000; beer (1965), 164,900; sugar, 119,000.
Crops (metric tons, 1966–67 crop year): Wheat, 1,172,000; sugar beets, 939,000; potatoes, 694,000; maize (1965), 220,000; barley, 177,000; oats, 138,000.
Minerals (metric tons, 1966): Iron ore, 12.204,000; limestone (1964), 1,908,000; crude petroleum, 1,620,000; coal, 1,464,000; nitrates (1964), 1,174,000; copper ore, 681,600; lignite, 67,000; silver (1965), 3,272,946 troy ounces.
Foreign Trade (1966): *Exports*, $877,500,000 (chief exports, 1965: copper, $480,500,000; iron ore, $78,300,000; nitrates, $30,100,000); *imports*, $755,300,000 (chief imports, 1965: chemical products, $40,600,000; electrical machinery, $39,129,000; cotton, $31,192,000). *Chief trading partners* (1965): U. S. (took 30% of exports, supplied 38% of imports); West Germany (took 12% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 36,425 miles (58,619 km); *motor vehicles* (1965), 192,447 (autos, 91,692); *railways* (1965), 4,857 miles (7,816 km); *merchant vessels* (1966), 47 (276,000 gross registered tons); *airline*, Linea Aerea Nacional de Chile; *principal airport*, Santiago.
Communications: *Telephones* (1966), 263,183; *television stations* (1965), 3; *television sets* (1965), 50,000; *radios*, 1963), 1,500,000; *newspapers* (1964), 46 (circulation, 1,006,000).

CHINA

A. F. P., FROM PICTORIAL PARADE

MUSHROOM CLOUD towers over Lob Nor, a desert lake in northwestern China, after the Chinese successfully detonated their first hydrogen bomb, June 17, 1967.

CHINA

China, the most populous nation in the world, remains divided into two opposing regimes: Communist China (the People's Republic of China), situated on the mainland; and Nationalist China (the Republic of China), on the island of Taiwan.

COMMUNIST CHINA

The Proletarian Cultural Revolution, which was launched in 1966, brought greater turmoil to Communist China in 1967. The Maoists struggled to overthrow "reactionary" elements in power, but met with strong resistance in many provinces. As a result, the struggle in 1967 did not give Mao Tse-tung the firm control of the country that he sought.

Growing isolation marked Peking's foreign relations during the year. A clash between Chinese students and Soviet police in Moscow was followed by violent demonstrations in Communist China against the Soviet Union. Peking suspended diplomatic relations with Indonesia and withdrew its economic aid mission to Burma. Communist Chinese agents organized riots in the British colony of Hong Kong and demonstrated in the Portuguese colony of Macao.

The Cultural Revolution. In 1967 the spearhead of the Cultural Revolution was directed at Liu Shao-ch'i, chairman of the People's Republic of China. Liu was accused of being the "top party person in authority taking the capitalist road." On March 31 the first official attack against him was made, and was followed by massive demonstrations. *Hung Ch'i* (*Red Flag*), the Communist ideological journal, announced his overthrow on July 1, but gave no indication of his being formally removed. Because Liu is chief of state, he can be legally dismissed only by the National People's Congress, which has not met for years.

The Red Guards attacked many top party leaders and administrators. Included in the list were T'ao

Chu, former propaganda chief and vice premier, and Teng Hsiao-p'ing, the party's general secretary. Only Premier Chou En-lai's insistence that government officials not be indiscriminately attacked restrained the militant Red Guards and saved many from molestation. Chou cooperated with the extremists, but sought to curb their excesses. Leaders of the Cultural Revolution who favored thoroughly dislodging their opponents were Chiang Ch'ing, wife of Mao Tse-tung; Defense Minister Lin Piao; and Ch'en Po-ta, editor of *Hung Ch'i* and Mao's former political secretary.

Widespread Conflicts. Mao's opponents were strongly entrenched, and in the attempt to seize power from them, the Red Guards carried the Cultural Revolution to various cities and rural areas, to the factories and mines. The opposition reacted by organizing masses of its own, particularly among the workers and peasants, whose stake in the existing industrial and agricultural system was threatened by Mao's extremism. Moreover, the brutality of the Red Guards drove many who previously had been neutral to the opposition's side. The result was struggle on a massive scale and turmoil throughout the nation.

Clashes between Mao's supporters and his opponents were reported in most of China's provinces, regions, and special municipalities throughout the year. In January a revolt involving thousands of persons broke out in Shanghai. Anti-Maoist workers had struck the city's factories in December 1966 and virtually halted communications and transportation. Anti-Maoist forces there and in other places encouraged workers to go to the capital and present their grievances. As a result, the disturbances spread to Peking in January, and for weeks the city and its suburbs were embroiled in conflict.

Other cities, such as Nanking, were also the scenes of violent upheavals. It was reported that in January, during a 3-day battle between the Red Guards and the Worker Red Corps (an opposition group of 100,000), 54 persons were killed, about 900 wounded, and 6,000 arrested.

Sporadic fighting also disturbed China's border areas in 1967. Disturbances occurred in Sinkiang, Manchuria, and Inner Mongolia. In August hundreds of Tibetans fled to India, escaping Red Guards who were trying to suppress Lamaism and to spread Maoist doctrine in Tibet.

Military Intervention. Because of the extent of the revolts and the strength of the opposition, Mao Tse-tung in January ordered the hitherto neutral army to support the Cultural Revolution. Military intervention enabled the Maoist forces to regain control in a number of places, including the city of Harbin and Anhwei province (in January) and the provinces of Shansi (in February) and Honan (in March). However, the seizure of control seldom resulted in the consolidation of power, and uprisings that had been suppressed often broke out again.

One of the difficulties confronting Mao was that the army did not solidly support him. To gain this support, Mao made Defense Minister Lin Piao his deputy. Lin Piao could command the obedience of most of the army, but he was unable to win the loyalty of units that had never been under his personal command, especially those that were still loyal to Ho Lung and former defense minister P'eng Teh-huai, both under criticism. In one instance, during a revolt in Wuhan in July, local military officials detained Minister of Security Hsieh Fu-chih and Wang Li, an important member of the Central Committee's Cultural Revolution group. They were released only after the personal intervention of Chou En-lai.

A Protracted Struggle. The turmoil and economic disruption brought about by the violence of the Red Guards caused the Peking government to adopt more moderate measures. In February the Red Guards were ordered to suspend their marches and to return home and take part in the Cultural Revolution there. Simultaneously, Peking called for the reopening of secondary schools, which had been closed since June 1966. Several colleges and technical schools resumed classes in July, and more reopened in October. Meanwhile, Peking stressed the importance

RED GUARDS, carrying signs, banners, and a portrait of Chairman Mao, march down a street in Canton as part of the Cultural Revolution that swept China during 1967.

LONDON DAILY EXPRESS, FROM PICTORIAL PARADE

COMMUNIST CHINA • Information Highlights

ASIA
AFRICA

Area: 3,691,502 square miles (9,561,000 sq km).

Population: 710,000,000 (mid-1966 UN est.).

Chief Cities (1958 est.): Peking, the capital (1959 est.), 6,800,000; Shanghai, 6,977,000; Tientsin, 3,278,000.

Government: *Chief of State*—Liu Shao-ch'i (took office 1959); *Premier*—Chou En-lai (took office 1949); *Communist party chairman*—Mao Tse-tung (took office 1931). *Parliament*—National People's Congress, 3,040 members.

Religious Faiths: Buddhists, 20% of population; Muslims, 5%; Taoists, 4%.

Education: *Total school enrollment*—100,810,000 (primary, 1959, 90,000,000; secondary, 1958, 8,520,000; teacher-training, 1958, 620,000; technical, 1958, 850,000; higher, 1962, 820,000).

Finance (1960 est.): *Revenues*, $35,010,000,000; *expenditures*, $35,010,000,000; *monetary unit*, yuan (2.46 yuan equal U. S.$1).

National Income (1960): $84,500,000,000; average annual income per person, $123.

Manufacturing (metric tons, 1965): Cement, 11,000,000; crude steel (1964), 9,500,000; sugar (1966), 3,146,000.

Crops (metric tons, 1966): Rice (1960, 85,000,000 (ranks 1st among world producers); soybeans, 10,970,000 (world rank, 2d); cottonseed, 3,047,500 (world rank, 3d).

Minerals (metric tons, 1965): Coal, 300,000,000 (ranks 3d among world producers); magnesite, 1,100,000 (world rank, 3d); iron ore, 39,000,000; salt, 13,000,000; crude petroleum, 10,000,000; pyrite, 1,500,000.

Foreign Trade (1964): *Exports*, $1,500,000,000; *imports*, $1,200,000,000. *Chief trading partners:* Albania (1963; took 28% of exports, supplied 21% of imports); USSR (1964; took 20% of exports, supplied 11% of imports); Hong Kong (1965; took 26% of exports, supplied 1% of imports).

Transportation: *Roads* (1958), 249,000 miles (400,000 km); *motor vehicles* (1965), 246,600 (automobiles, 32,900); *railways* (1965), 19,500 miles (31,381 km); *merchant vessels* (1966), 180 (760,000 gross registered tons).

Communications: *Telephones* (1948), 244,028; *television stations* (1967), 30; *television sets* (1967), 100,000; *radios* (1963), 8,000,000; *newspapers* (1955), 392.

of the three-way alliance of the masses, army, and "revolutionary" local cadres.

By November 1967, provincial revolutionary committees had replaced provincial Communist party committees in Shansi, Shangtung, Heilungkiang, Tsinghai, and Inner Mongolia. Municipal revolutionary committees were established in Peking, Shanghai, Tientsin, Hangchow, and Wuhan. In January 1968, Peking speeded up the program by giving key positions to tested military commanders and Communists, bypassing the younger revolutionaries.

The Maoists did not suceed in seizing power from all opponents, either by armed struggle or by political maneuvering. Of China's 26 administrative districts, pro-Maoists could claim control of about half, and even these were by no means exempt from disturbances and uprisings.

Economic Disruption. The chaos that resulted from the spread of the Cultural Revolution seriously affected the economy in many places. Labor strikes in the cities and violent clashes between Maoists and anti-Maoists disrupted transportation and paralyzed production. In the countryside, peasants deserted their work, refused to meet state grain quotas, and seized food from collective granaries. Peking blamed much of the chaos on the opposition, which, it charged, was sabotaging the government by bribing workers with increased wages and "economic benefits," and permitting the removal of property from factories.

As countermeasures, Peking in March ordered the peasants not to participate in the power struggle during the period of spring cultivation. It also commanded that special centers be established for fostering production in rural areas. Orders were issued for wages to be frozen and for military units to be sent to the mines and factories to "insure peak production."

Nuclear Weapons. On June 17, 1967, it became apparent that political disturbances in China had not affected its nuclear development program. On that day, less than three years after its first nuclear test, Communist China successfully exploded its first hydrogen bomb over Lob Nor, a desert lake in the Sinkiang-Uighur Autonomous Region. The explosion was estimated to have a force of several megatons. In December it was reported that Communist China was building missile-launching submarines in southern Manchuria.

China's rapid progress in nuclear development enhanced the country's position as a world power and underlined the military threat posed by its foreign policy. In a report published on August 2, the U. S. Joint Congressional Committee on Atomic Energy predicted that by about 1970 Communist China would be capable of launching a nuclear missile attack on the United States. Subsequently, the U. S. secretary of defense announced that a limited antiballistic missile system would be constructed in the United States against the possibility of a Communist Chinese attack. (See also ATOMIC ENERGY; MISSILES.)

Vietnam War. Communist China based its policy in Vietnam on the belief that the war would be protracted and that North Vietnam would emerge victorious. Peking, therefore, was opposed to peace talks that were in any way conciliatory.

On several occasions in 1967, U. S. planes striking at Hanoi's rail links and other installations close to the Chinese border accidentally flew over Chinese territory. Two U. S. planes were shot down by the Chinese over the Kwangsi-Chuang Autonomous Region on April 25, another over Hainan Island on June 26, and two over Kwangsi-Chuang on August 21. Peking immediately issued "serious warnings" and called on its armed forces to maintain constant vigilance against "military provocations" by the United States.

Foreign Minister Ch'en Yi stated on May 23 that China would enter the Vietnam War if North Vietnam requested it. However, some U. S. observers believed that Peking was deeply embroiled in its domestic difficulties and was in no position to risk war with the United States. U. S. Secretary of State Dean Rusk told a news conference on September 8 that the administration pursued the war with prudence and did its best to minimize actions that would lead to Chinese intervention. But he went on to say that he could not offer any "gold-plated guarantees" that Peking would not enter the war as a result of U. S. air attacks close to the Chinese border.

Chinese-Soviet Relations. On Jan. 25, 1967, about 70 Chinese students who were visiting Moscow

EASTFOTO

MAY DAY CELEBRATIONS in 1967 found Mao Tse-tung greeting followers in Peking with Lin Piao (*right*), Chinese defense minister and a Cultural Revolution leader.

clashed with Soviet police. The trouble began when the students started to chant political slogans in Red Square. The police intervened, and in the fray that developed, several students were injured. Peking protested and claimed that as many as 30 had been hurt, but Moscow laid the blame on the Chinese, who, it said, provoked the incident by their disorderly conduct.

In protest, the Chinese held massive anti-Soviet demonstrations and besieged the Soviet embassy in Peking for 18 days. Occupants of the embassy were subjected to round-the-clock denunciations over loudspeakers and other harassments. In return, Soviet workers staged counterdemonstrations outside the Chinese embassy grounds in Moscow, tore down propaganda display cases, and attacked Chinese personnel. Protests and counterprotests between the two governments were couched in such violent language that Chinese-Soviet relations seemed headed toward a break. The two states, however, did not sever relations, and the siege of the Soviet embassy was lifted on February 12.

Incidents continued to occur, however. In August the Soviet freighter *Svirsk* was detained in Dairen. Its captain and three crewmen were seized and taken ashore by Red Guards, who rampaged aboard the vessel for two days. Only after Soviet Premier Kosygin sent a telegram to Chou En-lai threatening to stop trade between the two countries was the ship released.

The Chinese-Soviet rift seriously affected the transportation of Soviet aid to North Vietnam. Moscow complained bitterly of Chinese obstruction. In April an agreement to speed the flow of Soviet military supplies to Hanoi was reported. Under the new arrangement, North Vietnam would claim Soviet materials as soon as they reached the Chinese border. From there the supplies would go by rail across China under North Vietnamese supervision.

Riots in Hong Kong. Riots broke out in the British colony of Hong Kong in May 1967. The disturbances began as minor labor disputes, which were immediately exploited by the Chinese Communists. Under their instigation and with their support, Chinese rioters fought the police and staged massive demonstrations.

Some officials feared that the outbreaks, coming soon after the trouble in Macao (which began at the end of 1966 and resulted in a curtailment of Portuguese authority in the colony), was the first stage in a move by Peking to take control of Hong Kong. However, Communist China profited by its trade with Hong Kong and stood to lose by a takeover. Moreover, the labor movement in the colony was weak. British authorities refused to be intimidated by the terrorist tactics of the Communists, and hundreds of rioters and Communist organizers were arrested.

There were sporadic outbursts throughout the spring, and hostilities began again at Lowu and Mankamto on the China-Hong Kong border in July and August.

Peking condemned the British for alleged "fascist suppression" of Chinese in the colony, and on Au-

LIN PIAO, defense minister of the People's Republic of China, clearly emerged in 1967 as the probable heir to Communist party chairman Mao Tse-tung. He played an important role in Mao's "Great Proletarian Cultural Revolution," begun in 1966, and he is said to have launched the Red Guard student movement, which sought to purge the nation of anti-Maoist influences. At the 18th anniversary celebration of the Chinese People's Republic, in October 1967, Lin was listed as the second-ranking member of the party.

Lin Piao was born Lin Yu-yung in Hupeh province, in central China, about 1907. He joined the Young Socialist League and Sun Yat-sen's Kuomintang party as a student and later received military training at Whampoa Academy under Chiang Kai-shek. After Chiang's break with the Communists in the late 1920's, Lin Piao joined Mao's forces and became known as a brilliant strategist of guerrilla warfare. Following the defeat of the Japanese in World War II, Lin Piao commanded Communist forces in the struggle that resulted in Communist conquest of the Chinese mainland in 1949.

EASTFOTO

NATIONALIST CHINA • Information Highlights

Area: 13,885 square miles (35,961 sq km).

Population: 13,072,000 (Mar. 31, 1967 est.).

Chief Cities (1965 est.): Taipei, the capital, 1,135,500; Kaohsiung, 596,092; Tainan, 369,820; Taichung, 364,262.

Government: *President*—Chiang Kai-shek (reelected for 4th term March 21, 1966); *Premier*—Yen Chia-kan (took office 1963). *Parliament*—National Assembly, 1,521 members.

Religious Faiths: Buddhists and Taoists, majority of population; Roman Catholics, 2.2%; Protestants, 2%; Muslims, 3%.

Education: *Literacy rate* (1964), 96.7% of population aged 12 and over. *Total school enrollment* (1964–65)—2,861,309 (primary, 2,202,867; secondary, 483,871; teacher-training, 3,718; technical, 106,843; higher, 64,010).

Finance (1964): *Revenues*, $266,350,084; *expenditures*, $292,552,953; *monetary unit*, New Taiwan dollar (40 Taiwan dollars equal U. S.$1).

Gross National Product (1966): $3,112,500,000.

National Income (1966): $2,522,500,000; average annual income per person, $197.

Economic Indexes (1966): *Industrial production*, 284 (1958=100); *agricultural production* (1965), 156 (1956–57=100); *cost of living*, 150 (1958=100).

Manufacturing (metric tons, 1965): Cement (1966), 3,108,000; sugar (1966), 852,000; wheat flour (1966), 270,000.

Crops (metric tons, 1966–67 crop year): Sweet potatoes and yams (1965–66), 3,131,000 (ranks 3d among world producers); rice, 2,960,000; bananas (1965–66), 452,000.

Minerals (metric tons, 1965): Bituminous coal (1966), 5,116,000; clays, 1,314,000; salt, 572,000.

Foreign Trade (1966): *Exports*, $536,300,000 (chief exports: sugar, $52,900,000; rice, $29,700,000; tea, $9,900,000); *imports*, $622,400,000 (chief imports, 1965: nonelectrical machinery, $83,950,000; iron and steel, $43,098,000; raw cotton, $36,263,000). *Chief trading partners* (1965): Japan (took 32% of exports, supplied 40% of imports); U. S. (took 23% of exports, supplied 32% of imports).

Transportation: *Roads* (1965), 10,136 miles (16,312 km); *motor vehicles* (1964), 30,456 (automobiles, 11,992); *railways* (1963), 2,308 miles (3,714 km); *merchant vessels* (1966), 119 (746,000 gross registered tons); *national airlines*, Civil Air Transport; Foshing Airlines.

Communications (1967): *Telephones*, 191,532; *television stations*, 4; *television sets*, 100,000; *radios* (1965), 1,270,000; *newspapers* (1963), 32 (daily circulation, 750,000).

gust 20 sent the British government an ultimatum. Peking demanded that the three pro-Communist Chinese newspapers that had been closed be allowed to reopen and that the 19 Chinese journalists under arrest be set free. Britain rejected the demands. Red Guards invaded the British diplomatic compound in Peking on August 22, set fire to the buildings, and beat the British chargé d'affaires and other members of the staff. Sino-British relations, though strained, were not broken, and an accord was reported in November. (See also HONG KONG.)

Relations with Other Countries. Communist China's relations with a number of Asian nations became increasingly strained during 1967. In Burma, Chinese residents were attacked by Burmese mobs after Chinese students defied a government order forbidding them to wear Mao Tse-tung badges. Peking protested vigorously, denounced the Burmese government, and demanded a public apology. On October 31, China announced it would withdraw its economic aid mission from Burma.

Communist China's relations with Indonesia also deteriorated. Anti-Chinese riots broke out in Djakarta in April, and the Indonesian government expelled the Chinese chargé d'affaires. Peking, in turn, expelled the Indonesian representative. Anti-Chinese sentiment mounted, and on August 5 about 500 Indonesian youths stormed the Chinese embassy in Djakarta and set fire to one of the buildings. Three youths and a soldier were shot, and Indonesia expelled two Chinese diplomats. Another attack occurred on October 1, when more than 1,000 Indonesians rioted and destroyed the Chinese embassy's radio-transmitting equipment; 20 staff members were injured. Indonesia recalled its diplomatic aides from Peking, and finally, on October 9, suspended diplomatic relations with Communist China.

Peking's relations with India also were marked by tension. In June two officials of the Indian embassy in Peking were detained by Chinese authorities and charged with espionage. Indian students retaliated by invading the Chinese embassy in New Delhi and assaulting eight Chinese officials with stones and clubs. In return, Chinese Red Guards besieged the Indian embassy in Peking, smashed windows, and burned Indian leaders in effigy.

Fighting broke out on September 11 between Chinese and Indian troops at Natu La Pass between Tibet and the Indian protectorate of Sikkim. More shots were exchanged at Cho La on October 1. Fighting, however, tapered off after India proposed a cease-fire. Both sides apparently had no intention of turning the incidents into a major conflict.

NATIONALIST CHINA

Nationalist China watched the political turmoil in Communist China with some hope, but took no military action toward recovering the mainland. During the year, Taiwan strengthened ties with friendly nations and made substantial progress in economic construction.

Political Affairs. The National Security Council was established in February 1967 to replace the National Defense Council as the supreme organ in charge of all major policies concerning national defense and reconstruction. President Chiang Kai-shek headed the new council, and Huang Shao-ku became the secretary-general.

In a military reshuffle on June 28, Gen. Kao K'uei-yuan became chief of the general staff, and Gen. Ch'en Ta-ch'ing commander in chief of the Chinese Army. The cabinet was shuffled on November 29, and new ministers for finance, justice, and communications were named.

On July 1, Taipei City was made a special municipality under the direct jurisdiction of the Executive Yüan (the cabinet). Its administrative area was expanded to include six more townships and Yangming Hill.

Education and Culture. In June 1967 the Nationalist government decided to extend the 6-year compulsory education period to nine years. Students will be given six years of primary education and three years of junior middle school education. Junior middle schools will teach courses in cultural development as well as vocational training.

On July 28 a committee was organized to foster the Chinese Cultural Renaissance movement. Under the sponsorship of President Chiang the movement was launched to counteract the Cultural Revolution of Mao Tse-tung on the Chinese mainland. Chiang appealed to all Chinese to rise and defend their cul-

CHIANG KAI-SHEK, president of the Republic of China, celebrated his 80th birthday in 1967, secure in his position as head of his Taiwan-based Nationalist regime. He continued to center his policies on the ultimate goal of reconquest of the Communist-controlled Chinese mainland.

Chiang was born on Oct. 31, 1887, in Fenghwan, Chekiang province. He attended Paoting military academy and joined Sun Yat-sen's revolutionary army in 1911. After becoming chairman of the national government at Nanking and generalissimo of all republican forces in 1928, he intensified his campaign against the Communists, now under Mao Tse-tung. Hostilities between Nationalist and Communist forces, suspended during the Chinese-Japanese war (1937–45), resumed after the defeat of the Japanese. Following the Communist conquest of the mainland in 1949, Chiang established the Chinese Nationalist government on Taiwan.

UPI

NATIONALIST CHINESE President Chiang Kai-shek (*right*) talks with children attending a ceremony honoring war dead. Scene was a shrine in Taiwan's capital, Taipei, in March.

tural heritage. He expressed the conviction that Confucian benevolence would triumph over Communist tyranny.

Research. Scientific research was stressed by Taiwan in 1967 in an effort to promote economic development and national defense. The National Science Council was established to coordinate science education, productive construction, and defense research. In September the United States sent a survey mission to Taipei in preparation for further cooperation in science development.

Economy. Taiwan's economy maintained its steady growth in 1967. Official estimates for the January-June period indicated a 19.3% increase in industrial production and a 4.6% increase in agricultural production. Taiwan's economic growth rate ranked first among the rates of the world's developing nations.

Taiwan made great efforts to improve conditions for investment. Measures taken in 1967 included simplification of investment and export procedures, development of industrial areas, and assistance for medium and small enterprises.

Notable among the economic projects was the improvement of the Kaohsiung Export Processing Zone, a 170-acre customs-free industrial enclave in which businesses produce for export only. Other achievements at Kaohsiung included the construction of a large shipyard capable of building 100,000-ton vessels, and the expansion of the airport for international air traffic.

Foreign Relations. Political turmoil in Communist China stirred the Nationalists in Taiwan, but any hope of invading the mainland was dampened by the United States, which gave no indication of willingness to support a military move against Communist China. The U. S. State Department noted that Nationalist China was bound by a pledge not to launch an invasion of the Chinese mainland without the prior approval of the United States. Taiwan maintained that no such approval was necessary, but it would have been difficult, if not impossible, for the Nationalists to undertake any large-scale offensive against the mainland without U. S. support.

Taiwan took active measures to strengthen its friendship with other countries in 1967. At the ministerial conference of the Asian and Pacific Council held in July, Chinese Nationalist delegates stressed the unity of free Asian and Pacific nations in combating external aggression and in developing economic and cultural cooperation.

On May 9, Vice President and Premier Yen Chia-kan arrived in Washington, D. C., at the invitation of President Johnson, for a 19-day official visit. Yen reviewed the political situation in Communist China with U. S. government leaders, but there was no indication that he broached the subject of invading the Chinese mainland. In the joint statement issued on May 10, Yen and Johnson agreed that developments on the Chinese mainland were closely related to the peace and security of Asia. Johnson pledged to continue military aid to Taiwan and reaffirmed U. S. support for the Republic of China's seat in the United Nations.

Japanese Prime Minister Eisaku Sato arrived in Taipei on September 7 for a 3-day visit. In the joint statement of September 9, Premier Yen and Premier Sato agreed to a further strengthening of cooperation and mutual understanding between the two countries. At a press conference in Taipei, Sato declared that Japan would adhere to its policy of not becoming involved politically with Communist China.

Other political leaders visiting Taiwan in 1967 included Premier Thanom Kittikachorn of Thailand in March and Prime Minister Harold Holt of Australia in April. Malaysia established a consulate in Taipei in February. Nationalist China maintained diplomatic relations with 18 African nations, and had 17 agricultural teams and two veterinary teams in Africa in 1967. (See also ASIA.)

CHESTER C. TAN
New York University

CHRISTIAN CHURCHES (DISCIPLES OF CHRIST)

The Christian Churches (Disciples of Christ) reported a worldwide membership of 2,133,245 in 1967. Its largest organized body is the International Convention of Christian Churches (Disciples of Christ), which had 8,147 congregations with 1,903,395 members in the United States and Canada.

In 1967 there were Christian Churches in Australia, England, Ireland, New Zealand, and about 40 other countries. In many mission lands established churches are moving toward autonomy, as in the Democratic Republic of Congo, or toward union with other churches, as in East Asia.

The 1967 Assembly of the International Convention, held in St. Louis, Mo., on October 13–18, was the first delegate assembly, composed of voting representatives. Previous assemblies were mass meetings. The major item of business before the St. Louis assembly had to do with reorganization of the church communion based on a report and recommendation submitted by the Commission on Brotherhood restructure.

The next Assembly of the International Convention is scheduled for Kansas City, Mo., from Sept. 27 to Oct. 2, 1968. This assembly is expected to vote on the adoption of the Provisional Design for reorganization of the Christian Church (Disciples of Christ).

A. Dale Fiers
Executive Secretary, Christian Churches

CHRISTIAN SCIENCE

The church entered its second century in 1967 with special emphasis on spreading its teachings in the community and the world. This theme was stressed at the annual meeting on June 5 of The Mother Church, The First Church of Christ, Scientist, in Boston, Mass. About 8,000 members from all parts of the world attended the meeting.

On July 18 work was begun on the foundation for the new administration building, part of the church's projected 15-acre center in Boston's Back Bay district. The entire center is scheduled to be finished by 1970.

About 6,000 college students met at the Boston headquarters on August 24–26 for their international biennial conference. It was the largest youth meeting in the church's history. More than 1,100 colleges and universities in 32 countries were represented.

In September four inspirational conferences were held in South Vietnam for military personnel. Throughout the year a Christian Science wartime minister and 18 Christian Science representatives in Vietnam held regular services and gave spiritual aid. Conferences were also held at military bases in Korea, Hawaii, Japan, Okinawa, Thailand, and the Philippines. European-based servicemen met at Berchtesgaden, Germany, in October for a week of talks, seminars, and individual counseling.

Erwin D. Canham, editor in chief of the *Christian Science Monitor,* completed his term as president of the church and was succeeded by Mrs. Beatrice T. Pittman of Boston.

David E. Sleeper
The First Church of Christ, Scientist, Boston

CHURCH MEMBERSHIP, U. S. See Religion.

CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

In 1967 the church had 4,022 wards and independent branches in 425 stakes (territorial units) and 2,053 branches in 75 missions. There were about 12,000 full-time missionaries serving in the missions throughout the world and about 5,200 part-time missionaries working in the stakes. Total church membership was 2,480,899, including 68,843 convert baptisms during the year.

The work of the church among the Spanish-speaking people was given new impetus with the organization of new stakes in Mexico City, Guatemala City, and Buenos Aires.

In order to accommodate the increasing number of church members actively engaged in work on genealogies and the performance of marriages for eternity for living persons and their deceased ancestors, and other ordinance work, the presidency of the church announced that plans would begin immediately for the construction of two new temples in Utah, one in Ogden and the other in Provo. This will make a total of 15 temples in active service in the church. There were 888 chapel building projects in the planning and development stages in 1967.

The church enlarged its radio and television holdings with the purchase of stations KMBZ-AM and KMBR-FM in Kansas City, Mo.

The world-famous Tabernacle Choir, which has appeared on a national radio network since 1929, presented 10 sold-out concerts before 90,000 persons on a tour that included Expo 67 in Montreal, Canada; Narragansett Park, Pawtucket, R. I.; Chautauqua and Saratoga Springs, N. Y.; Detroit, Mich.; Tulsa, Okla.; and Omaha, Neb. During July and August tens of thousands of tourists attended the free open-air musical production "Promised Valley," presented nightly in Temple Square in Salt Lake City to commemorate the historic pioneer migration to the valleys of the Rocky Mountains.

Regional priesthood representatives of the Council of the Twelve Apostles were chosen and appointed to serve in a supervisory capacity in the various stake and mission areas throughout the world. David Lawrence McKay was appointed general superintendent of the church's Sunday Schools, succeeding George R. Hill, who had served for 17 years.

Joseph Anderson
Secretary to the First Presidency

CHURCHES OF CHRIST

Overseas missions, "Exodus" movements, in which members move from areas with well-established churches to other parts of the country to found new churches, and campaigns in large cities in the United States and abroad continued to flourish among the Churches of Christ in 1967. Church colleges have grown so much that in 1967 the five 4-year colleges had 10,000 students, and the 14 junior colleges 3,000.

There has been a definite trend within the Churches of Christ toward eliminating racial barriers. Church colleges now accept all races. A rally held in Los Angeles on September 30 to promote interracial and intercongregational fellowship gave evidence of this trend within congregations.

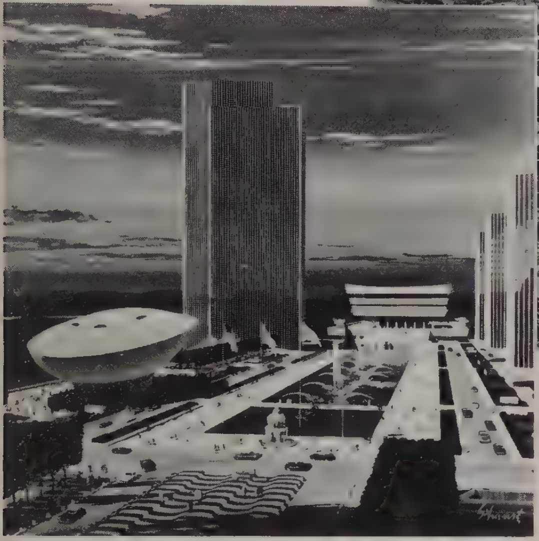
Schools of preaching have come to play a significant role in the training of ministers for the church. The schools are generally operated by a congregation, and an intensive program of Bible study and religion is conducted. Schools are located in Memphis, Tenn., and Lubbock, Texas.

The church has turned its attention toward inner cities in metropolitan areas. Harding College in Searcy, Ark., conducted an Inner City Workshop in the summer of 1967. Northeastern Christian Junior College, Villanova, Pa., is preparing for an extended workshop in the summer of 1968. A Christian service center has been set up in Philadelphia, Pa.

Work on campuses has been given new emphasis by the Campus Evangelism program, under the auspices of the Broadway Church of Christ in Lubbock.

Elza Huffard
Northeastern Christian Junior College

CITIES AND URBAN AFFAIRS



NEW YORK STATE OFFICE OF GENERAL SERVICES

URBAN RENEWAL on a grand scale will transform downtown Albany from a 90-acre substandard district to an institutional complex befitting the capital of New York state. The South Mall project, as it is called, is already under way (*above*) and when finished it will include the structures shown at left—the 43-story office building, the bowl-shaped Meeting Center, and the large ornamental pool in the center.

CITIES AND URBAN AFFAIRS

The 20th century can be justifiably called the "Age of Cities." Urbanization has progressed to the point that in 1960 about 30% of the world's population was living in urban areas; by the end of the century this figure is likely to exceed 60%. The uncontrolled growth of cities has become a worldwide problem of staggering dimensions, and its impact on social life and public health may prove disastrous if measures are not taken to reverse current trends.

The Urban Crisis. In the United States the turning point from a rural to an urban society was reached in the early 1920's. The population was almost equally divided then between town and country, but thereafter the scales shifted overwhelmingly toward urbanization. By the 1960's, more than two thirds of the American people were living in cities, and more than half of the total population was crammed into 213 urban places, collectively occupying less than 1% of the nation's land.

Even these compelling figures fail to convey fully the unbalanced nature of American urbanization and land use. The most rapid rate of urban expansion occurred after World War II. These years were marked by a minimal amount of planning, by an irresponsible disregard for public services, and by a decline in virtually all standards of residential construction. Central areas of major American cities were permitted to deteriorate to an appalling degree. In one city after another, the traditional urban core declined in population, commerce, and cultural activity, turning into a shabby, desolate area or an ugly, rat-infested slum for newly arrived minority groups. Large-scale, poorly built suburban developments appeared outside fixed city limits, eating into potential recreation areas and the surrounding farmlands. On the perimeter of the old core, giant office buildings and superblock apartment houses began to replace many attractive residential buildings, and they increasingly eroded traditional community and neighborhood ties in the city proper. To many families, the city ceased to be a satisfactory arena for daily life.

The problem of working in the city—of traveling from outlying residential areas to inner, highly centralized business districts—became formidable. During rush hours, public transit systems were burdened beyond the carrying power of already inadequate facilities. As commuters and local residents shifted increasingly to motor vehicles, city streets became congested with automobiles and buses, producing serious air pollution problems. By the 1960's, a long-predicted urban crisis had emerged in full bloom, and there was very little prospect that decisive solutions were in the offing.

Urban Renewal. During the immediate postwar period, municipal planners were occupied primarily with new housing programs to meet the needs of World War II veterans and their families. By the 1960's, attention had shifted to the improvement of deteriorating downtown areas, the traditional urban core of large cities.

The emergence of a new Negro militancy has produced a refocusing of programs, but the new focus has yet to achieve clear definition. Planning efforts appeared to be divided among programs for new ghetto housing, the rehabilitation of downtown areas, and middle-income residential construction that is designed to draw suburban families back to the city.

Funds for new housing in slum areas ultimately depend upon congressional action—action that has generally been very slow in coming and very limited in scope. If the refusal of the House of Representatives, on July 20, 1967, to allocate a mere $40 million, spread over two years, for rat control in ghetto areas is indicative of the mood of Congress, it appears likely that future appropriations for the renewal of slum districts will fall far short of existing needs. (The rat-control legislation was enacted later in 1967 by the House, but only after severe criticism in the national press.) A number of large insurance corporations offered to invest a billion dollars in slum housing—reversing a long-standing policy of avoiding low-cost ghetto mortgages—but the extent to which this investment program is carried out depends on the scope of the administration's rent-subsidy program. In any case a billion dollars will not solve the problem of deteriorating slum dwellings in the United States, nor is Congress likely to appropriate adequate funds for rent subsidies. In 1967, Congress provided only $10 million for rent subsidies, even though the Administration asked for a mere $40 million.

In the absence of extensive slum-clearing programs, the attention of many planners has turned to a technique, admittedly limited in scope, known as "instant rehabilitation." In New York City's Lower East Side, for example, three 75-year-old slum dwellings were outfitted with prefabricated kitchen-bathroom units and modernized in only 48 hours. After the residents were removed to temporary shelters, teams of construction workers stripped down each building to its masonry walls, joists, and subflooring, and then totally renovated the interior. The shortcomings of this approach are obvious: dwelling space and exposure to sunlight are still limited by the form and dimensions of the building itself. A modernized interior, moreover, does not alter the harsh reality that its occupants live in an economically depressed and socially neglected neighborhood.

A great deal of effort in 1967 was still being directed toward downtown renewal programs, although on a scale greatly diminished from that of two years earlier. Albany, the capital of New York State, initiated the largest of these programs by starting the construction of the South Mall complex, a collection of largely administrative structures, meeting halls, and institutional buildings. A great slablike office building, 43 stories high, will overlook three meeting halls, a state library, a museum, and several commercial and office buildings. The entire structural ensemble will rest on an immense concrete podium, nearly 700 feet wide and almost 1,500 feet long, softened in appearance by lawns, trees, and pools. The project will require four years to complete at an estimated cost of a half-billion dollars. It will provide office space for 10,000 state employees.

Malls, plazas, and pedestrian walkways have acquired a great deal of popularity in downtown rehabilitation schemes. Shopping malls now exist in Minneapolis, Knoxville, Kalamazoo, Pomona, and other American cities. A mall-like effect was achieved by redecorating a two-block section of F Street in Washington, D. C., with trees, benches, and kiosks. Recently, second-story pedestrian walkways have been constructed in Hartford, Baltimore, and Cincinnati.

The Cincinnati walkway has aroused the greatest interest because it involves the least amount of

THE NEW YORK TIMES

GHETTO BLIGHT, common to many American cities, is typified by this alleyway in New York's Harlem where a periodic clean-up is carried out.

change in existing structures and a minimal investment for a project of its size. The pedestrian walkways, reached by escalators, will extend for 15 blocks off Fountain Square in the heart of Cincinnati's old downtown shopping district. The area was visibly deteriorating over the years as a retailing center, and the walkway project is expected to give it a new and highly remunerative lease on life. Immediate construction plans will take two years to complete at an investment of $6 million. Additional plans have been developed to extend the walkway into other streets.

An increasing amount of planning effort was also directed toward providing housing for middle-income families, the dwindling tax base of many large American cities. In St. Louis, $52 million was invested in the Mansion House project, a complex of high-rise dwellings, stores, and restaurants near Eero Saarinen's Gateway Arch. Cincinnati has been occupied with the creation of middle-class enclaves in the declining Mount Adams district. Similar projects have been planned or are under way in New Haven, New York City, Cleveland, Baltimore, and other large cities. Philadelphia is still rescuing and restoring its colonial legacy of Georgian town houses, although the cost of these renovated dwellings is prohibitive for families in middle-income groups. None of these rehabilitation projects, however, has arrested the flow of middle-class families from central urban districts. The exodus of these families to outlying residential areas has been limited almost exclusively by the cost and availability of suburban housing.

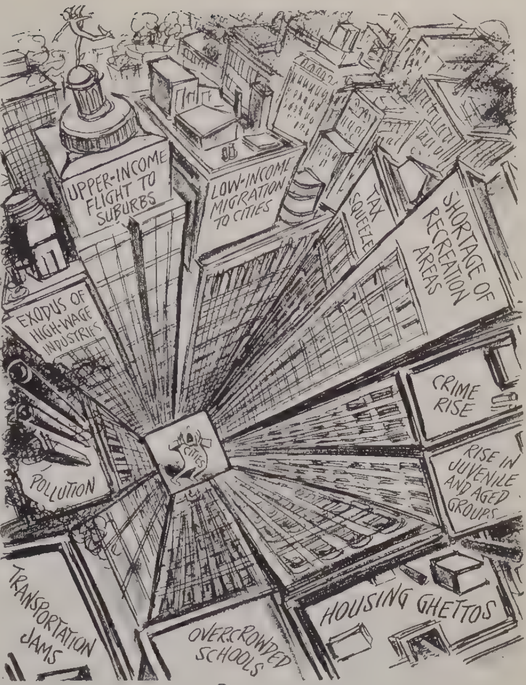
Urban Transportation. The enormous growth of American cities has produced a grave transportation problem in nearly all urban areas—a problem that the automobile has exacerbated rather than relieved. Early postwar attempts to provide adequate roadways for motor vehicles served only to bring more cars into the cities, complicating existing efforts to transport pedestrians from homes to places of work. As automobiles nibbled away at the use of existing rail traffic systems, many railroads restricted or discontinued passenger services. The need to provide new means of public transportation between and within cities became one of the most serious problems facing city planners.

San Francisco took the lead in public transportation by establishing a 75-mile rail system known as the Bay Area Rapid Transit System District (BARTD). BARTD will be fully operating by 1969. Its air-conditioned trains, running at an average speed of 50 mph, will be controlled automatically by scheduling devices, providing trains every two or three minutes during rush hours.

Plans are under way to construct rapid transit systems in Washington, D. C., and Atlanta. A 14-mile rail rapid transit line has been proposed to link downtown Philadelphia with downtown Camden. In Chicago, voters approved a $28 million bond issue for constructing a rapid transit rail line along the Dan Ryan and Kennedy expressways. In New York State, voters approved a $2.5 billion transportation bond issue, half of it for mass transit (mostly New York City subways) and the rest for highways and airports.

(See also TRANSPORTATION.)

Urban Government. Few major planning efforts can be fulfilled without federal financial assistance. The federal government, with its enormous resources, provides the grants and matching funds for many developmental projects, and it plays an increasing role as mediator between conflicting local and state jurisdictions. This new and ever-growing role has had a profound effect on the function of the citizen and municipal government in urban affairs.


UPPER-INCOME FLIGHT TO SUBURBS
LOW-INCOME MIGRATION TO CITIES
TAX SQUEEZE
SHORTAGE OF RECREATION AREAS
EXODUS OF HIGH-WAGE INDUSTRIES
CRIME RISE
RISE IN JUVENILE AND AGED GROUPS
CITIES
POLLUTION
TRANSPORTATION JAMS
OVERCROWDED SCHOOLS
HOUSING GHETTOS

© 1966 HERBLOCK IN THE WASHINGTON POST

"Help!"

Theoretically, the traditional ideal of American government is a federal structure in which political authority is vested in local, decentralized communities. In reality, however, the federal system has yielded increasingly to highly centralized forms of government, with a resulting decline in individual and local autonomy. The traditional role of the citizen is preempted by urban specialists such as city managers and planning boards, and the traditional role of the community is preempted by regional, state, and national agencies.

Recent federal legislation tends to give legal acknowledgement to this trend toward centralization and to reinforce its thrust. In 1965, Congress established a Department of Housing and Urban Development, headed by Secretary Robert C. Weaver. A year later, Congress established a Department of Transportation, headed by Secretary Alan S. Boyd. In addition, Congress passed legislation establishing programs for the beautification of American highways, for demonstration projects ("model cities"), and for "new communities." The Federal Highways Beautification Act is expected to remove many of the eyesores—billboards, junk depots, and waste dumps—that offend motorists. The "model cities" act is expected to throw additional resources behind rehabilitation projects in a number of American cities.

It is doubtful, however, whether the new departments of the recent spate of urban legislation will score decisive advances in overall urban planning. Assuming that any further erosion of local authority is desirable, the authority vested in the Department of Housing and Urban Development and in the Department of Transportation is very limited. The funds allocated to these departments and to the execution of the beautification and "model cities" programs fall pitifully short of existing needs. The "model cities" program affects a small number of communities, and some of its projects have already been sharply criticized as unimaginative and anemic. High-sounding as their names may be, these newly formed departments, given their limitations of scope and resources, can hardly be expected to arrest, much less reverse, the plummeting decline of American cities.

New Towns. More and more city planners are convinced that the revitalization of urban life in the United States depends on radically new concepts of the future city. Perhaps the most popular concept in the theoretical armory of the city planners is called the "new town" or "satellite town." The "new town" concept is not new. Borrowed from England, it projects the carefully planned construction of small communities in a rural setting, fully equipped with recreational facilities and shops, and also supplied with factories and offices to provide local employment. The community, in effect, tends to approximate a decentralized, self-sustaining unit.

Most of the "new towns" built in the United States fall far short of this image. Many of them are simply residential areas; others are simply retirement communities for elderly people. Recently, "new towns" attracted the interest of several large American corporations. Goodyear is building a "new town" in Arizona; Southern California Edison is planning one a few miles outside Los Angeles; Westinghouse expects to start construction on a "new town" in Florida.

Experience with these projects has been very unsatisfactory. Humble Oil's Clear Lake City on the edge of Houston, Texas, for example, exhibits a number of defects that hardly qualify the project as more than a suburb, with most of the characteristics of existing suburban developments. Clear Lake City has been growing piecemeal since 1961 around the NASA Manned Spacecraft Center and a few small private plants. Large areas of the community look like a dreary suburban development.

Westlake Village, a "new town" started 35 miles outside Los Angeles in 1966, consists largely of high-priced homes. Although Westlake's planners believe that some 5,000 jobs eventually will be located in the community, it seems certain that a high proportion of the residents simply will flow into the Los Angeles commuter system.

Crystal Lake City and Westlake Village point up the essential defects of most existing and proposed "new towns" in the United States. A high proportion of the residents—often a majority—work outside the "new town" and commute to a nearby large city. In the absence of restrictions on urban growth (such as "green belts"), the larger city is destined to swallow all the nearby "new towns." In any event, the "new towns" tend to handle only a portion of the excessively high population currently building up in urbanized areas.

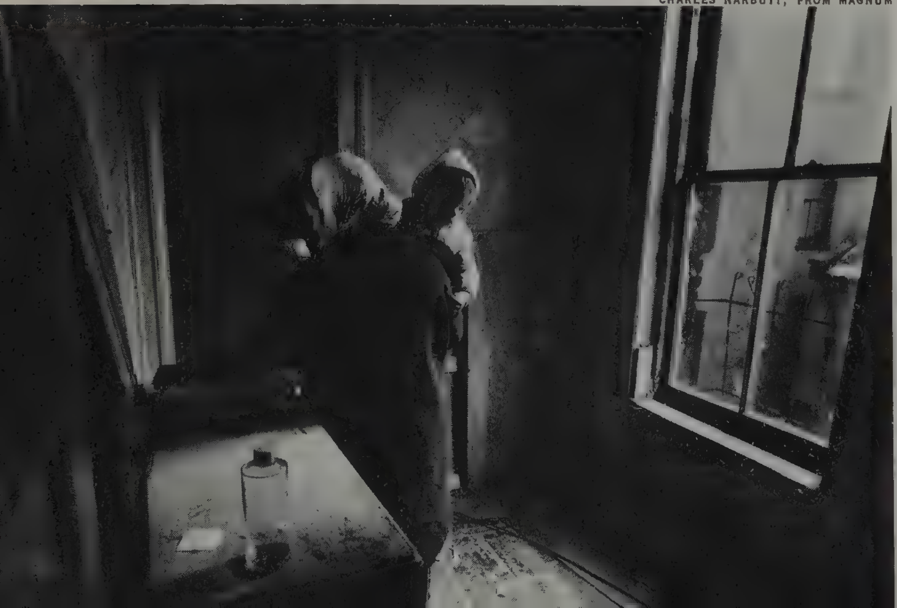
Many older "new towns" have not evolved as their planners anticipated. The Sunset/Whitney Ranch project near Sacramento, Calif., has failed to attract an adequate number of commercial and industrial enterprises. Even Reston, Va., a "new town" 18 miles west of Washington, D. C., had sold less than 600 homes in late 1967, probably because of the high price of its town houses. (See also HOUSING.)

The Outlook. In the opinion of an increasing number of city planners, the future of American cities will remain grim until means are worked out to decentralize existing conurbations—aggregations of communities—and urban belts. The problem is not to provide easier access for motor vehicles within cities, but to reduce their use, A rational urban planning program must focus not on providing more housing inside the large cities but on reducing existing urban population densities by means of economically balanced, architecturally attractive, and culturally vital communities in sparsely populated areas. But such programs involve new, entirely revolutionary conceptions of social organization that few people in and out of government are currently prepared to accept.

Further Reading: Goodman, Paul, and Goodman, Percival, *Communitas* (New York 1960); Gutkind, E. A., *The Twilight of Cities* (New York 1962); Elias, C. E., Jr., Gillies, James, and Riemer, Svend, *Metropolis: Values in Conflict* (Belmont, Calif., 1963).

LEWIS HERBER
Specialist in City Planning;
Author of "Crisis in Our Cities"

CHARLES NARBUTT, FROM MAGNUM



CRUMBLING WALLS, rats, little furniture—or heat—are not unusual features in the slums of New York, where this mother and child live.

CIVIL RIGHTS

"We have endured a week such as no nation should live through: a time of violence and tragedy . . . . There is a danger that the worst toll of this tragedy will be counted in the hearts of Americans: in hatred, in insecurity, in fear . . . ."

—President Johnson, in a nationwide address on July 27, 1967, during the riots in Detroit.

DETROIT, 1967

UPI

CIVIL RIGHTS

In the last two decades the civil rights movement, sparked and aided by decisions of the U. S. Supreme Court, has led the way in expanding the meaning of freedom and equality within the United States. Two revolutions now are on the way to accomplishment, even if slowly—desegregation in education and "one man, one vote" in the apportionment of state legislatures.

Over the objections of law enforcement officials, court-enforced reforms in state criminal procedure have become the order of the day. Congressional and state legislation has supplemented Supreme Court decisions to make civil rights and equal economic opportunity realities for more Americans. The constitutional right of a minority to dissent and to work for peaceful change has been the basic principle on which the civil rights revolution has been built.

Although a calendar year is an arbitrary unit of time, it is sufficiently long to evidence definite characteristics in an area such as civil rights, and this was true of 1967. The year saw the right of dissent become confused with unlawful civil disobedience focused on a constitutional objective and with riots for the sake of destruction. An example of the peaceful exercise of the right of dissent was the nightly marches of Father James E. Groppi and his adherents in Milwaukee, with the objective of forcing the city council to pass an open-housing ordinance.

The instances of civil disobedience involving unlawful action were legion. Good illustrations were the student sit-ins at colleges aimed at preventing the armed services from recruiting or representatives of the Dow Chemical Company from interviewing prospective applicants for jobs in their concern, a small part of whose output is connected with the Vietnam War effort. Without doubt the most confusing part of the picture, and the one outwardly least connected with the right of dissent and with civil rights in general, were the riots, dominated by Negroes, that spread in various degrees through more than 100 cities during 1967.

Urban Riots. From April through September the cities of the country erupted with racial violence. The statistics were almost as vulnerable as any study of the basic causes. About the only unanimity among the analysts was that the civil rights movement, as such, was only indirectly concerned. By mid-August it was estimated that almost 100 persons were dead, over 2,000 injured, and some 12,000 arrested as a result of the riots.

The greatest violence and the most destruction occurred in July in Detroit and Newark, N. J. For five days and nights Detroit suffered one of the bloodiest and most costly "revolts" in modern American history. One observer likened it to "the Berlin of 1945." It was estimated that over 40 persons

LIQUORS
HERMANS
BEER WINE

UPI

"BURN, BABY, BURN," was a popular cry of the summer rioters as ghetto sections of Detroit (*left*) and other American cities went up in flames.

(*Below*) COMMISSION named by the President to study the riots is headed by Governor Kerner (*left*) and Mayor Lindsay (*right*). They are listening to Newark Mayor H. J. Addonizio.

THE NEGRO 'REVOLUTION' OF 1967

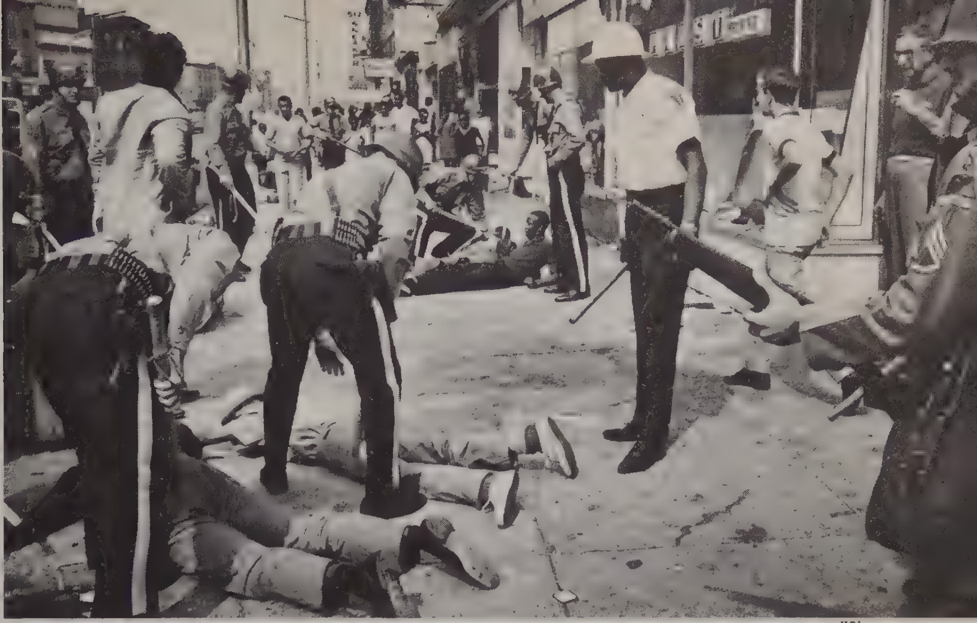
During the summer of 1967, disadvantaged areas in dozens of United States cities erupted in violence. The unprecedented wave of destruction caused deepest public concern. A commission set up by President Johnson found no proof of a nationwide conspiracy but promised a report (due to be released in 1968) "uncomfortable to the American people."

UPI

(*Below*) LOOTING in Detroit and elsewhere showed rioters' scorn for property rights. Here they haul away goods through a smashed storefront.

UPI

STATE POLICE and National Guardsmen called to help local police in Newark, N. J. (*right*), as in other U. S. cities, stand guard over a number of suspected looters.



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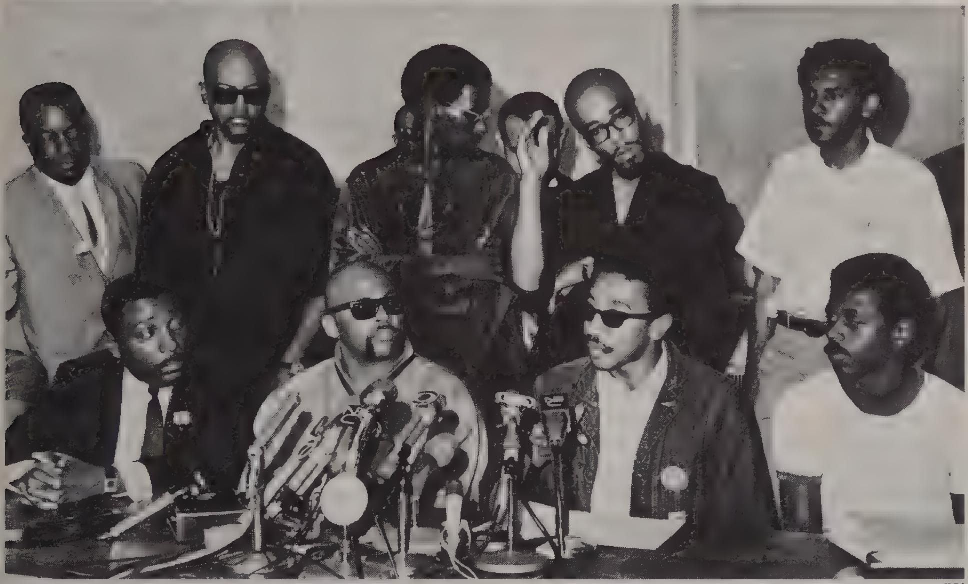

UPI

(*Above*) BLACK POWER conference in Newark, after the riots, included militant leaders (*l. to r., seated*) Dick Gregory, Ron Karenga, Rap Brown, and Ralph Featherstone.

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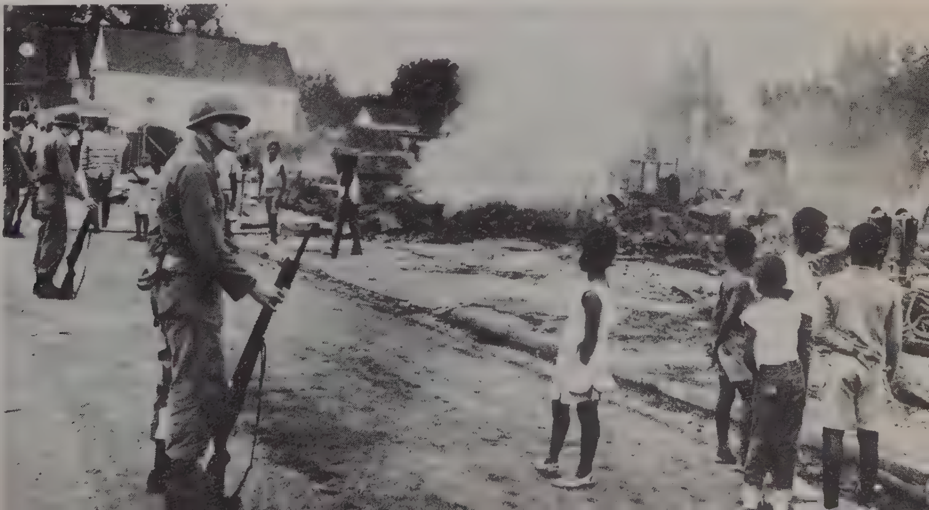


NATIONAL GUARDSMEN stand watch over the smoldering ruins of a Negro section of Cambridge, Md., burned to the ground after a speech by Rap Brown.

H(UBERT GEROID) RAP BROWN, who succeeded Stokely Carmichael on May 12, 1967, as chairman of the Student Nonviolent Coordinating Committee (SNCC), has emerged as the most militant of the "black power" advocates. In his fiery speeches he has called on Negroes to wage "guerrilla war" against the white establishment. On August 14 he was indicted in Cambridge, Md., on charges of having incited racial violence there in July.

Brown was born in Baton Rouge, La., on Oct. 4, 1943, the son of an oil company employee. He entered Southern University in his home city in 1960 as a sociology major. As a student, he compiled a good scholastic record and was active in the civil rights movement. He left in 1963 without graduating and went to work for SNCC, taking part in voter registration drives and other projects in Mississippi and Alabama. He was SNCC director for Alabama at the time of his election as national chairman.

MARTIN LUTHER KING, JR., emerged in 1967 as a leading opponent of U. S. military involvement in Vietnam while continuing in his role as a civil rights leader. In July he joined other moderate Negro leaders in condemning the racial violence that had broken out in various cities, and in the following month he called for a nationwide civil disobedience campaign to compel the government to meet Negro demands for better conditions.

Dr. King was born in Atlanta, Ga., on Jan. 15, 1929, and studied at Morehouse College (B. A., 1948), Crozer Theological Seminary (B. D., 1951), and Boston University (Ph. D., 1955). He became a national figure as a result of his leadership of the successful bus boycott in Montgomery, Ala., in 1955–56. In 1957 he helped found the Southern Christian Leadership Conference and became its president. King won the 1964 Nobel Peace Prize for his work on behalf of civil rights.

were killed, 350 injured, and 3,800 arrested, that 5,000 were made homeless due to fire-gutted houses, and that almost 3,000 businesses were sacked and looted. Damage caused by mob action was estimated in the hundreds of millions of dollars. Newark counted 26 dead, over 1,000 injured, 1,400 arrested, and some $50 million in damage.

Whether it was the three nights of rioting in Roxbury (a section of Boston) in June, or the disorders in Tampa, Cincinnati, and Atlanta, or the subsequent disturbances in Buffalo, N. Y., New Brunswick, N. J., Cairo, Ill., Albany, N. Y., or progressive New Haven Conn., the description was that of anarchy, fire, and looting.

To determine any connection with civil rights, the immediate spark must be differentiated from the underlying causes. Can it be said that the progress toward greater freedom and equality for the 22 million Negroes was too agonizingly slow? The torches that started the conflagrations were as varied as the size of the cities.

Boston's explosion began with police action because of a sit-in at the welfare department. Tampa erupted with the shooting of a 19-year-old Negro burglary suspect. In Cincinnati over 100 stores were fire-bombed after the arrest of a Negro demonstrator who was protesting the death sentence of his cousin. A routine police raid on an after-hours club and center of "black power" sparked Detroit's holocaust.

In all of these cases mere incidents released mass actions of destruction for the sake of destroying, an exertion of physical power against the "haves," an example of dissent for the sake of dissent. The underlying causes were legion, but among them was an often unrecognized dissatisfaction with the lack of equality for the Negro in the midst of half-realized promises. The throwing of a rock does not trigger mob action in affluent suburbia.

Public reactions to the riots varied, and there was no consensus as to cures. Congress, however, undoubtedly reflected the views of many constituents when it passed antiriot bills but failed to appropriate the full funds requested by the President for antipoverty programs. And Congress adjourned in December without having passed any of the administration's major civil rights measures, including bills against housing and jury discrimination and for the protection of civil rights workers.

Some Civil Rights Gains. On the positive side of the ledger was the appointment on June 13 of the first Negro, Thurgood Marshall, to the U. S. Supreme Court. This could result in an even higher percentage of decisions in favor of civil rights, since he replaced the more conservative Justice Tom C. Clark. President Johnson also appointed a Negro as chief executive of the city of Washington.

Representing a distinct landmark in the civil liberties movement was the conviction on October 20 of 7 out of 18 white defendants by an all-white Mississippi jury in the federal trial for conspiracy to interfere with the civil rights of three civil rights workers murdered in 1964. The result also reflected a change in the method of selecting Mississippi juries, as well as in the attitude of U. S. District Judge W. Harold Cox.

Desegregation of public schools continued its slow progress, but noteworthy was the April decision of the Fifth Circuit Court of Appeals ordering seven school districts in Louisiana and Alabama to integrate by the fall of 1967.

Elections. The off-year elections in November were important to civil rights not because of personalities but because of issues. In Boston's nonpartisan election for mayor, Mrs. Louise Day Hicks, an ardent opponent of desegregation by busing, was defeated. In Cleveland and Gary, Negroes were elected mayor. Even if issues other than race were present in each instance, the outcome indicated the strength of Negro voters and proved that it was possible for a Negro to be elected.

Supreme Court. It has become almost commonplace in the last decade to think of the U. S. Supreme Court as deciding all cases involving civil rights and liberties in favor of greater freedom. Statistics show, however, that in such cases only about two thirds of the court's decisions favor expanded civil rights.

Both in several judgments with opinion and in refusals to hear appeals from lower courts, the Supreme Court in 1967 showed that it would not approve excesses in civil disturbance. Thus, in *Adderley* v. *Florida,* a bare majority of the court upheld convictions for criminal trespass where 32 students protesting segregation and the arrest of others had continued peacefully to block a jail driveway after a warning to move. Again, in *Walker* v. *City of Birmingham,* by a vote of 5 to 4, the court upheld the contempt conviction of the Negro leader Rev. Martin Luther King, Jr., and seven other Negro ministers who had paraded after being refused a permit and in violation of a state court injunction. By the much more decisive vote of 7 to 2, the disorderly conduct conviction of 17 antiwar demonstrators in New York City was left standing.

In several other instances in 1967, the Supreme Court refused to take appeals from convictions for the sit-in type of disorderly conduct or breach of the peace. It would seem that rioters, as well as college students who "sit in" to prevent governmental and other agencies from conscripting or hiring, must recognize that freedom of speech and assembly does not include interference with the rights of others.

In a broader area than civil disturbance, the Supreme Court continued to expand the meaning of liberty and freedom as protected by the federal Constitution.

As expected, the miscegenation law of the state of Virginia was declared unconstitutional, as was also California's "Proposition 14," which attempted to protect the right of the property owner to sell or lease his property to whomever he pleases. The state may not prevent whites and Negroes from marrying, nor may it, in effect, guarantee the right to discriminate in housing. The section of New York state's education law that was aimed at disqualifying from teaching in public schools and colleges those who would overthrow the government by illegal means was declared unconstitutionally vague.

In several cases the famous freedom of the press decision in *Times* v. *Sullivan* was extended to protect untruthful but not malicious comments about public figures, as well as public officials. Convictions were reversed in three instances of alleged pornographic publications.

Although a bare majority of the court allowed the malapportioned Georgia legislature to follow the state constitution and elect a governor after no candidate had received a majority of the popular vote, the court continued to insist on substantial compliance with "one man, one vote" in legislative apportionments in Florida and Texas.

In the 1966–67 sessions, 33 cases in the Supreme Court concerned criminal proceedings, with 23 resulting in favor of the civil right involved. Especially important were the invalidation of New York's statute that permitted "bugging" of conversations upon an affidavit by a district attorney and order of a court; the holdings that an accused has a right to a lawyer at a police lineup where witnesses are making an identification and at his first appeal; and the decision that the protection of the 1st Amendment of the U. S. Constitution covers juvenile delinquency hearings involving possible commitment to a state institution. (See also LAW.)

RALPH F. BISCHOFF
New York University

CLARK, Ramsey. See biographical sketch under UNITED STATES.

CLEVELAND

Political history was made in Cleveland, Ohio's largest city (1967 est. pop.: city, 825,000; metropolitan area, 2,115,000) when Carl B. Stokes, an Ohio state representative, defeated Seth C. Taft, a lawyer, in the November 1967 elections. Stokes, a Democrat, became the first Negro to be elected mayor of a major American city. The victor by a narrow margin over his Republican opponent, he was inaugurated on November 13 for a 2-year term.

There was no racial rioting in Cleveland in 1967 and, although the city administration was the target of much criticism, employment and production were high in the Cleveland area. The city continued its role as a major manufacturing center.

Elections. Stokes' victory in the October Democratic primary over Mayor Ralph S. Locher signaled the end of a political dynasty which began in 1942 when Frank J. Lausche (now U. S. senator) first became Cleveland's mayor. Principal factors contributing to Locher's defeat in the primary were the widespread feeling that his administration had been negligent in renewing older parts of the city; his loss of the editorial support of both of Cleveland's daily papers, the *Plain Dealer* and the *Press;* serious rioting by Negroes in 1964 and 1966; and increased crime in the streets.

In both the primary and the election, Stokes received over 95% of the Negro vote and over 15% of the white vote. Taft, the grandson of President William Howard Taft, made the best showing for a Republican in a Cleveland mayoralty race since 1939.

Construction. Major rebuilding in downtown Cleveland and elsewhere in the city moved forward during the year. A new 32-story federal office building was occupied and a 20-story apartment house neared completion downtown. The Central National Bank began construction of its $20 million, 23-story headquarters, the first major Cleveland bank building to be erected since 1930. An annex to the Cleveland Aquarium that tripled the space of the old building was opened on April 29.

Education. Confederation of two privately supported institutions at University Circle, Case Institute of Technology and Western Reserve University, was completed on July 1. The name of the new institution is Case Western Reserve University. Robert W. Morse, president of Case, became president and John S. Millis, president of Western Reserve, became chancellor.

Cleveland State University began construction of a $30 million complex of classroom, library-faculty, administration, and science buildings near the downtown area. The headquarters of the Cleveland Auto Club nearby was bought for offices and seminar rooms. Cuyahoga County Community College, which has a $35 million building program, commenced construction of three buildings on its metropolitan campus. County voters in the November elections approved a $1 million 5-year levy on real estate to raise $30 million for the community college, with 75% going for operational costs and the rest for new buildings.

Transportation. The last links within Greater Cleveland of Interstate 71, connecting downtown Cleveland and other areas of the city directly with Columbus and Cincinnati, were opened in 1967 or were scheduled to open in 1968.

Economy. Business capital expenditures in Cuyahoga county, at more than $230 million in 1966, were expected to rise by more than 25% in 1967. Cleveland's business index for January–August 1967 stood at 150 (1957–59 = 100).

Finance. Cleveland's operating budget for 1967 was set at $74,008,494, up from $62,624,904 in 1966. The net funded debt, as of Jan. 1, 1967, was $140,234,000, down from $140,872,000 in 1966. The tax rate stood at 5.29% of assessed real estate value.

JOHN F. HUTH, JR.
"The Plain Dealer," Cleveland

CLOTHING INDUSTRY

Shipments of women's and children's clothing by U. S. manufacturers generally increased in number of units and in dollar value in 1967. Dresses, coats, and suits in the higher price ranges gave particularly good accounts of themselves in sales. Women's apparel, as a whole, sold better than men's wear.

One reason for the gain in women's wear sales was that the number of women aged 15 through 34—the most clothes-conscious age bracket—has been increasing more rapidly than those in other age brackets. In addition the number of working women is on the rise. Over 1.2 million more women were employed in 1966 than in 1965, and typically, women who work spend more on clothes than do those who are out of the labor force. Continued fashion innovations also helped to brighten the sales picture.

Records show that consumer purchases of women's and children's clothes advanced 12% between 1965 and 1966, while the total of all consumer expenditures rose only 10%. This continued a trend that has lasted several years.

U.S. APPAREL SHIPMENTS AND PRODUCTION
(in millions)

Kind of Apparel	Net Value of Shipments 1966[1]	1965	Unit Output 1966[1]	1965
Unit-price dresses	$1,577	$1,448	180.9	178.3
Dozen-price dresses	406	347	110.2	103.8
Coats and suits	804	783	36.0	37.2
Blouses	503	489	207.8	216.9
Men's suits	[2]	113.9	20.7	22.4
Men's dress and sport coats	[2]	273.3	13.1	12.5
Men's overcoats and topcoats	[2]	113.3	3.8	4.4

[1] Preliminary figures. [2] Not available.

Production data in the men's field do not include the very substantial quantities of uniforms produced under government contract, which cut into civilian production.

Merger Trend. The trend toward bigger firms through consolidations and mergers has continued. The number of publicly owned women's garment houses has quadrupled from the 22 that existed in 1958. In 1965 there were about 2,600 women's and children's apparel companies in New York, and they accounted for $4.4 billion volume. The trend toward bigness is indicated by the fact that in 1950 more women's firms (4,500) in that market had a lower sales volume ($2.9 billion). However, smaller concerns are still predominant.

Principal Markets. New York City leads all U. S. markets in manufacturers' sales of women's, men's, and children's wear. The New York area's dollar volume of women's and children's wear is 60% of the national total. The women's wear firms in New York City number 2,578—58% of the total. Los Angeles is the next most important center. Philapelphia, Chicago, and Boston account for much smaller sales. The number of men's wear firms in New York City is 821—42% of the national total. Other leading men's wear manufacturing centers are Philadelphia, Chicago, and Los Angeles.

Canada. The factory value of shipped clothing was estimated at $857,060,000 in 1965, compared with an estimated $792,900,000 in 1964. The breakdown (with 1964 figures in parentheses) was as follows: men's clothing, $378,094,000 ($351,300,000); women's clothing, $385,421,000 ($354,200,000); and children's clothing, $93,545,000 ($87,400,000).

Samuel Feinberg
"Women's Wear Daily"

COAL

The U. S. bituminous coal industry completed its sixth consecutive year of growth in 1967. Production totaled 550 million tons, an increase of 18 million tons over 1966. It was the coal industry's best year since 1948, when over 566 million tons were burned. About 535 million tons were consumed in 1967.

Markets for Coal. More than half the coal consumed in 1967 went to the electric power market. The need for coal-produced electricity pushed utility consumption up to 276 million tons during the year.

Peabody Coal Co., the biggest U. S. coal producer, announced in January 1967 that it would open a 275-mile (442.5-km) coal-slurry pipeline to supply 117 million tons of coal annually to the Mohave Power Project in Clark county, Nev. The Mohave plant is part of a power complex under construction in the Southwest. It will send electricity to southern California and the Colorado River basin states by extra-high-voltage power lines and will be the first major use of coal-generated electricity on the West Coast.

In other coal markets, the use of coking coal dropped by 4 million tons in 1967, down to 92 million, and retail deliveries declined 1 million tons to 17 million. Coal consumption in general industrial markets declined slightly to 102 million tons.

International Trade. Coal is a major international trade item, and the United States is the world's leading coal exporter. In 1967 the United States exported 48 million tons. Canada continued to be the largest customer for U. S. coal, importing 15 million tons.

The French *Cetra Columba* (87,000 tons), the world's largest supercollier, made its maiden voyage to the port at Hampton Roads, Va., in January.

U.S. PRODUCTION OF COAL
(In short tons)

State	1964	1965	1966
Alabama	14,435,454	14,831,592	14,218,722
Colorado	4,355,245	4,790,458	5,222,372
Illinois	55,022,602	58,483,208	63,571,188
Indiana	15,074,631	15,565,409	17,326,350
Kentucky	82,747,171	85,765,711	93,155,877
Ohio	37,310,377	39,389,721	43,341,431
Pennsylvania			
Anthracite	17,184,251	14,865,955	12,951,000
Bituminous	76,530,758	80,308,449	81,442,801
Tennessee	5,990,405	5,865,173	6,308,524
Utah	4,719,843	4,992,003	4,635,330
Virginia	31,653,484	34,052,915	35,564,511
West Virginia	141,408,498	149,191,208	149,680,701
Wyoming	3,101,314	3,259,793	3,670,137
Other	14,648,170	15,592,623	15,743,266
Total	504,182,203	526,954,218	546,832,210
Total Value	$2,314,229,422	$2,395,693,155	$2,519,669,135

Source: U.S. Bureau of Mines

Research Programs. Progress in making coal into gasoline at a competitive price was reported in 1967. Consolidation Coal Co. opened a gasoline-from-coal pilot plant at Cresap, W. Va. At the plant dedication in May 1967, Secretary of the Interior Stewart L. Udall said commercial coal conversion plants using a minimum of 10,000 tons per day could produce at least $63 million worth of high-quality gasoline a year from $15 million worth of bituminous coal.

Scientists are also seeking to produce pipeline-quality gas from coal to supplement declining natural gas reserves. Bituminous Coal Research, Inc., is building a 100-ton-per-hour process- and equipment-development unit at Monroeville, Pa.

Barbara L. Downey
National Coal Association

THE *POINT HUDSON*, one of 26 82-foot U. S. Coast Guard cutters operating in South Vietnam in 1967, patrols the Saigon River in search of junks carrying supplies to insurgent Communist forces.

U. S. COAST GUARD

COAST GUARD

Leaving the Treasury Department, which had controlled its activities in peacetime since 1790, the U. S. Coast Guard on April 1, 1967, became part of the newly formed Department of Transportation.

Vietnam. At the request of the U. S. Navy, the Coast Guard sent 5 311-foot (94.8-meter) ocean-going cutters to Vietnam in May 1967 to supplement the 26 82-foot (25-meter) cutters already there. They were used to bar sea transit of men and materials from North Vietnam to Vietcong units in the south.

Budget and Strength. Modernization of the Coast Guard continued in 1967. The budget was $544.3 million, compared with $524.5 million in 1966. Military personnel increased by 1,465 to 36,735, and authorized civilian personnel numbered 6,236.

Law Enforcement. Coast Guardsmen in fiscal 1967 boarded 98,704 vessels to examine papers, spent 43,478 hours supervising the loading of explosives, and inspected 14,159 other dangerous cargoes. The service inspected for certification 5,785 vessels, inspected 1,380 foreign vessels, and made dry dock examinations of 5,698 vessels. It also reviewed plans for 36,494 vessels.

Rescues. In fiscal 1967 the Coast Guard answered 29,832 calls for assistance, towed 14,930 vessels, and rescued 2,525 persons. The value of vessels and aircraft aided in fiscal 1967, including cargo, was $2,341,693,000.

Aids to Navigation. As of June 30, 1967, the Coast Guard maintained 43,738 navigation aids in the United States and other areas. They included 57 loran stations, 198 radio beacons, 7,118 day beacons, 11,299 lights (including lightships), 593 fog signals (excluding sound buoys), 3,638 lighted buoys, and 20,809 unlighted buoys. Four ocean stations were maintained in the North Atlantic and two in the Pacific to provide search and rescue, communications and air navigation facilities, and meteorological services. Two Coast Guard icebreakers performed scientific research in the Arctic Ocean. Coast Guard aircraft flew reconnaissance on the International Ice Patrol, watching 440 icebergs in the spring and summer of 1967.

Fleet. The Coast Guard's surface fleet in 1967 numbered 361 floating units, from major cutters to small craft assigned to stations. The year saw the commissioning of the first 378-foot (115.2-meter) cutter, the *Hamilton*. Fixed- and rotary-wing aircraft in operation totaled 162.

Boating Safety. The Coast Guard Auxiliary, a volunteer organization, was active in 913 flotillas. Its 24,981 members gave instruction in safe boating to 144,208 persons, examined 163,028 motorboats, patrolled 5,025 regattas, answered 6,917 calls for help, and saved 181 lives.

WILLARD J. SMITH, *Admiral, USCG*
Commandant, U. S. Coast Guard

COFFEE

World production of coffee totaled 67,335,000 bags (of 132.3 pounds each) in the 1967–68 marketing year, an increase of 5,687,000 bags or nearly 9% from the crop of the previous year. The 1967–68 crop is, however, 17% smaller than the record crop of 1965–66. Coffee for export totaled 50,470,000 bags in 1967–68, about 4,896,000 bags more than in 1966–67.

PRODUCTION OF GREEN COFFEE IN PRINCIPAL COUNTRIES
(Number of bags of 60 kilograms—132.3 pounds—each)

Country	Average 1960–61 to 1964–65	1966–67	Estimate, 1967–68
Brazil	25,840,000	21,000,000	23,000,000
Colombia	7,760,000	7,600,000	7,600,000
Ivory Coast	3,185,000	2,250,000	4,200,000
Angola	2,910,000	3,300,000	3,200,000
Mexico	2,431,000	2,650,000	3,000,000
Uganda	2,429,000	2,400,000	2,550,000
El Salvador	1,812,000	1,950,000	2,100,000
Indonesia	2,016,000	1,900,000	2,100,000
Guatemala	1,704,000	1,670,000	1,900,000
Ethiopia	1,490,000	1,760,000	1,700,000
World total	65,354,000	61,648,000	67,335,000

South America, which accounted for half of the world total, produced 33,491,000 bags in 1967–68, an increase of 2,120,000 bags from a year earlier. About 22,643,000 bags were for export, compared with 21,108,000 bags in 1966–67. Production in Brazil, the world's leading coffee-producing nation, totaled 23,000,000 bags, 9% more than in the previous year. Production in North America totaled 11,398,000 bags, up from 10,129,000 bags in 1966–67.

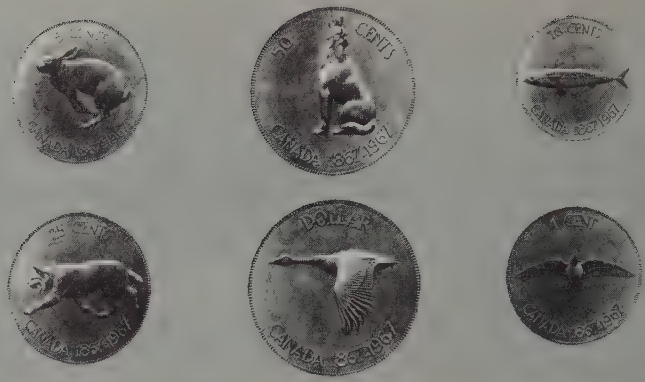
The African crop totaled 17,724,000 bags in 1967–68, an increase of 2,045,000 bags from a year earlier. A large increase in production in the Ivory Coast offset decreases in Angola and several other African countries. Production in Asia and Oceania increased from 4,469,000 bags in 1966–67 to 4,469,000 bags in 1967–68.

NICOLAS KOMINUS
Kominus Agri-Info Associates

CANADIAN COINS

CANADA issued a series of Centennial coins in 1967, with Queen Elizabeth II shown on the obverse side (*below*) and with six examples of the wildlife of Canada on the reverse sides (*right*). Denominations are from one cent to one dollar.

ELIZABETH II D·G·REGINA



ROYAL CANADIAN MINT PHOTOS

COIN COLLECTING

There were many developments of interest to coin collectors in 1967.

U. S. Mints. On Jan. 1, 1967, the U. S. Treasury Department resumed normal dating procedures for coins struck at the three United States mints. (Philadelphia and Denver are the main production mints. San Francisco, closed in 1955, was reopened to meet the exigencies of the coin shortage. Its use in 1968 is anticipated to be mainly for the issuance of coins for collector's sets.) For several years the Treasury had back-dated coins in an effort to discourage coin hoarding. But coins struck in 1967 were dated 1967, and coins struck in 1968 will be dated 1968.

In April, Eva Adams, director of the mint, announced that a new rolling die machine at the Philadelphia Mint (now under construction) will be able to strike an unprecedented 10,000 one-cent pieces per minute.

Organizations. In June the American Numismatic Association dedicated its new home and headquarters in Colorado Springs, Col. The nonprofit ANA is the world's largest coin collectors' organization. It has about 25,000 members.

The Professional Numismatists Guild, a nationwide dealers' organization, announced plans for an authentication committee to act as a clearinghouse for information concerning counterfeits, forgeries, and other spurious coins.

Lilly Collection. In June it was announced that Josiah K. Lilly of the pharmaceutical firm had collected a group of gold coins during the 16 years immediately preceding his death in 1966. Valued at about $5 million, the collection held such rarities as an 1822 U. S. $5 gold piece and an 1875 U. S. $3 gold piece.

Silver. In July the U. S. Treasury removed the price ceiling on silver of $1.29 an ounce, causing pre-1965 silver coins still in circulation to have an intrinsic value greater than their face value. Silver certificates (currency) climbed in value to the point at which dealers were paying a 40% premium over face value by December 1967. (See also SILVER.)

Liberty Nickel. One of five known 1913 Liberty nickels was sold at auction in August by Dayton's Paramount International Coin Company for an all-time high coin auction price of $46,000.

Thefts. Burglaries continue to be a problem for coin dealers and collectors. In October a $1.5 million coin collection was stolen from Willis H. Du Pont of Miami, Fla. A Brasher doubloon (colonial $16 gold piece), stolen from Yale University in 1965, was recovered in November by an insurance firm.

Proof Sets. The Treasury announced in September that beginning in 1968 the United States would again sell proof sets to collectors. The new price of $5 per set represents an increase over the $2.10 price of the 1950–64 period. (No U. S. proof sets have been issued since 1964.) Proof sets for 1968 will be struck at the San Francisco Mint, and will be identified with "S" mint marks—the first coins with "S" mint marks to be issued since 1955.

After a year's slump due to overspeculation in certain issues, the coin market as a whole showed signs of a recovery by midyear. Dealers reported increased business and a number of top rarities set new auction price records.

Canada. The special 1967 Centennial coins with designs depicting Canadian wildlife went into circulation in January. The Centennial coins will be dated only 1967; later coins will revert to the pre-1967 standard designs.

Canada announced a change to nickel coinage to conserve silver, following the step that the United States had taken earlier. An interim alloy of 50% silver and 50% copper for the dime and quarter-dollar pieces is planned until the vending machine industry is ready to convert to nickel coinage. The interim alloy has about the same electrical properties (necessary for certain types of vending machine slots) as the old silver coinage. The diameters of 50¢ and $1 coins will be reduced.

Britain. Britain announced in November that, in order to discourage hoarding, all coins struck from 1967 until conversion to a decimal coinage system in 1971 will bear the 1967 date. Prices of copper halfpennies, the lowest denomination currently being struck, soared to 10 times face value on the news that this denomination would be discontinued.

The British pound sterling was devalued in November from $2.80 to $2.40. The new $2.40 figure means that for the first time in history the English penny (240 pennies to the pound sterling) was equal in value to the U. S. one-cent piece.

Panama. The republic of Panama issued 12,701 proof sets dated 1966. Orders for 1967 sets climbed to a new record near the 20,000 mark.

Q. DAVID BOWERS
Columnist, "Coin World"
Author, "Coins and Collectors"

COLLEGES AND UNIVERSITIES

Enrollments in institutions of higher learning in the United States continue to increase rapidly. In the fall of 1967, the U. S. Office of Education estimated the total number of degree-credit students to be 6,500,000, an increase of 500,000, or 8.3%, over the previous fall. Publicly controlled colleges and universities had 4,400,000 students, an increase of 300,000 in one year. Privately controlled institutions had 2,100,000 students, up 100,000.

Enrollment Trends. The U. S. Office of Education has predicted that the college population will increase four times as fast as the national population in the next decade. By 1976, when the nation's population will have increased 12%, the rise in college enrollment is expected to be 49%. Colleges and universities are expected to enroll about 9 million degree-seeking students in 1975–76. The gain is expected to result from the higher birthrates in the 1950's and from the increasing proportion of students going to college and graduate school.

Expenditures. Outlays for higher education will reach a record $18.3 billion in 1967–68, the U. S. Office of Education has estimated. Of this sum, $8.5 billion will be spent by publicly controlled institutions for current expense and interest, plus $2.2 billion for capital outlay. Nonpublic institutions will spend $6.4 billion for operation and interest and $1.2 billion for capital outlay.

Higher Education Facilities. In the year ending June 30, 1967, over one third of all U. S. colleges and universities received federal aid to build or remodel classrooms, laboratories, and libraries. Grants and loans totaling $710.7 million were made to 877 institutions under the Higher Education Facilities Act of 1963. This federal aid helped to generate nearly $2 billion worth of construction.

Faculty and Staff Needs. Colleges and universities will have increased their full-time professional staff by more than 50% during a 6-year period ending in the fall of 1969, according to a study made by the U. S. Office of Education. The creation of new institutions of higher education, especially junior colleges, presents problems of staffing. From 1961 through 1965, a total of 179 new institutions were created, 114 of them junior colleges and technical institutes. The study reveals a high percentage of part-time faculty, making up 24.3% of the total professional staff. In administrative fields, part-time staff totals 10.4%; in academic, 26.6%; and in technical and semiprofessional, 36.8%.

College Costs. The cost of attending college continues to rise. A sampling of 1967–68 charges in 99 private institutions reveals an average of $1,500 for tuition and fees, and $1,000 for room and board. The total average major cost of $2,500 represents an increase of $500 since 1963–64.

Charges in 33 public institutions in 1967–68 averaged $350 for tuition and fees, and $850 for room and board. The total major cost of $1,200 is up $150 over the 1963–64 average.

Degrees Conferred. One adult in six is now earning a bachelor's degree, and the ratio is expected to become one in five within the next few years. An estimated 570,000 bachelor's and first professional degrees, 130,000 master's degrees, and 19,000 doctorates were awarded during 1966–1967.

Church-Related Institutions. The Danforth Commission on Church Colleges and Universities has completed a systematic survey of church-sponsored higher education. Its report, published by the American Council on Education, notes that 817 institutions, or more than one third of all U. S. colleges and universities, are church-affiliated. These institutions enroll over one sixth of today's students. They are sponsored by 64 religious bodies. By affiliation about 57% are Protestant, 42% Roman Catholic, and 1% Jewish. The Danforth Commission offered 15 recommendations for strengthening church-affiliated institutions. They included a more experimental approach to education, a clearer definition of purpose, the elimination of haphazard construction of new colleges, and the furnishing of intellectual leadership in the study of issues facing the church.

The CIA and the NSA. In February 1967 it was revealed that the Central Intelligence Agency had been subsidizing the National Student Association, the nation's largest organization of college students. Since 1952, the CIA had channeled some $3 million to the NSA under the cover of grants from obscure private organizations.

In terms of the total CIA expenditures, the amount was not large, and NSA leaders were inclined to discount its importance in the budget of their organization. However, the fact that a federal agency was operating covertly to aid a supposedly free-spirited student group caused widespread repercussions. President Johnson ordered a high-level review of any government policy that would appear to threaten what Nicholas deB. Katzenbach, his undersecretary of state, called "the integrity and independence of the educational community."

NSA leaders had originally sought government aid to expand their overseas program, which included student exchanges and participation in international student conferences. CIA funds helped to underwrite these activities. There appeared to be little if any CIA pressure on the national activities of NSA, which is known as liberal or even left wing. Later in 1967, the NSA convention urged abolition of the military draft, complete student control over university social and disciplinary regulations, and, by a 2-to-1 vote, "the unification of all black people in America for their liberation by any means necessary." (See ESPIONAGE AND INTELLIGENCE.)

Campus Demonstrations. Banner-carrying, shouting students staged numerous campus protests in 1967. Their usual target was the Vietnam War, but the militancy extended to other areas, as when students at City College of New York protested the construction of a temporary building. The war was opposed particularly through attempts to block on-campus recruiting by the military services and defense contractors. Although only a relatively small proportion of the student body was involved in such demonstrations, the effects were disruptive. At the University of Indiana, 37 demonstrators were taken to jail when they tried to block a recruiter from Dow Chemical Company, which makes napalm for the military. At Harvard, 73 students were put on probation for the "forcible obstruction" of a Dow recruiter. Dr. Nathan M. Pusey, president of Harvard, said "objections [to demonstrations] arise only when [students] . . . seek to restrain the freedom of expression or movement of others."

The Governing Council of the American Association of University Professors denounced demonstrations that "disrupt the operations" of institutions and deplored the use of "physical force" by students.

EDWARD ALVEY, JR.
Mary Washington College, University of Virginia

MAJOR COLLEGES AND UNIVERSITIES, U. S. AND CANADA

Note: Symbols and abbreviations that follow the name of each school listed are as follows: *Level of Instruction*—(1) 2-year junior college; (2) senior college granting bachelor's and/or first professional degree; (3) senior college granting master's and/or second professional degree; (4) college or university offering a doctoral program. *Student Body*—(M) men only; (W) women only; (Coed) coeducational; (Coord) separate colleges for men and women. *Control*—(Public) district, municipal, state, or federal; (Private) proprietary, corporation, or church. *Enrollment*—All students of college grade for the academic year 1965–66, excepting correspondence course students.

Name and Location	*Level of Instruction*	*Student Body*	*Control*	*Enrollment*
Abilene Christian College, Abilene, Texas	3	Coed	Private	3,073
Abraham Baldwin Agricultural College, Tifton, Ga	1	Coed	Public	1,335
Acadia University, Wolfville, Nova Scotia	3	Coed	Pvt-Baptist	1,511
Adams State College, Alamosa, Colo	3	Coed	Public	2,242
Adelphi University, Garden City, N.Y	4	Coed	Private	8,322
Adrian College, Adrian, Mich	2	Coed	Pvt-Methodist	1,403
Agnes Scott College, Decatur, Ga	2	W	Private	744
Air Force Institute of Technology, Wright-Patterson AFB, Ohio	3	M	Public	424
Akron, University of, Akron, Ohio	4	Coed	Public	12,007
Alabama, University of, University, Ala	4	Coed	Public	17,177
Alabama Agricultural and Mechanical College, Normal, Ala	3	Coed	Public	1,646
Alabama College, Montevallo, Ala	3	Coed	Public	1,715
Alaska, University of, College, Alaska (incl. community colleges at Anchorage, Juneau, Ketchikan, Palmer, Sitka)	4	Coed	Public	4,140
Alaska Methodist University, Anchorage, Alaska	2	Coed	Pvt-Methodist	485
Albany State College, Albany, Ga	2	Coed	Public	1,292
Alberta, University of, Edmonton & Calgary, Alta	4	Coed	Public	11,032
Albertus Magnus College, New Haven, Conn	2	W	Pvt-Roman Catholic	602
Albion College, Albion, Mich	3	Coed	Pvt-Methodist	1,557
Albright College, Reading, Pa	2	Coed	Pvt-Brethren	1,446
Albuquerque, University of, Albuquerque, N.M	2	Coed	Pvt-Roman Catholic	981
Alcorn Agricultural & Mechanical College, Lorman, Miss	2	Coed	Public	1,928
Alderson-Broaddus College, Philippi, W.Va	2	Coed	Pvt-Baptist	591
Alfred University, Alfred, N.Y	4	Coed	Public-Private	1,631
Allan Hancock College, Santa Maria, Calif	1	Coed	Public	3,946
Allegany Community College, Cumberland, Md	1	Coed	Public	629
Allegheny College, Meadville, Pa	3	Coed	Private	1,461
Alliance College, Cambridge Springs, Pa	2	Coord	Private	440
Alma College, Alma, Mich	2	Coed	Pvt-Presbyterian	1,002
Alpena Community College, Alpena, Mich	1	Coed	Public	719
Alverno College, Milwaukee, Wis	2	W	Pvt-Roman Catholic	1,470
Alvin Junior College, Alvin, Texas	1	Coed	Public	1,709
Amarillo College, Amarillo, Texas	1	Coed	Public	2,647
American Conservatory of Music, Chicago, Ill	3	Coed	Private	394
American International College, Springfield, Mass	3	Coed	Private	3,402
American River College, Sacramento, Calif	1	Coed	Public	8,363
American University, The, Washington, D.C	4	Coed	Pvt-Methodist	13,078
Amherst College, Amherst, Mass	3	M	Private	1,206
Anderson College, Anderson, Ind	2	Coed	Pvt-Church of God	1,394
Anderson College, Anderson, S.C	1	Coed	Pvt-Baptist	810
Andover Newton Theological School, Newton Center, Mass	3	Coed	Private	368
Andrew College, Cuthbert, Ga	1	Coed	Pvt-Methodist	444
Andrews University, Berrien Springs, Mich	3	Coed	Pvt-Seventh-day Adventist	1,947
Angelo State College, San Angelo, Texas	2	Coed	Public	2,308
Anna Maria College for Women, Paxton, Mass	2	W	Pvt-Roman Catholic	519
Annhurst College, Woodstock, Conn	2	W	Pvt-Roman Catholic	330
Antelope Valley Junior College, Lancaster, Calif	1	Coed	Public	2,662
Antioch College, Yellow Springs, Ohio	3	Coed	Private	1,679
Appalachian State Teachers College, Boone, N.C	3	Coed	Public	4,653
Aquinas College, Grand Rapids, Mich	3	Coed	Pvt-Roman Catholic	1,357
Arizona, University of, Tucson, Ariz	4	Coed	Public	21,430
Arizona State University, Tempe, Ariz	4	Coed	Public	22,224
Arkansas, University of, Fayetteville, Ark	4	Coed	Public	11,505
Arkansas Agricultural, Mechanical, & Normal College, Pine Bluff, Ark	2	Coed	Public	2,957
Arkansas Agricultural & Mechanical College, College Heights, Ark	2	Coed	Public	1,608
Arkansas College, Batesville, Ark	2	Coed	Pvt-Presbyterian	336
Arkansas Polytechnic College, Russellville, Ark	2	Coed	Public	2,219
Arkansas State College, State College, Ark	3	Coed	Public	5,349
Arkansas State Teachers College, Conway, Ark	3	Coed	Public	3,129
Arlington State College, Arlington, Texas	2	Coed	Public	11,849
Armstrong Schools of Business, Berkeley, Calif	3	Coed	Private	502
Armstrong State College, Savannah, Ga	1	Coed	Public	1,274
Art Center College of Design, The, Los Angeles, Calif	3	Coed	Private	1,097
Art Institute of Chicago, Schools of the, Chicago, Ill	3	Coed	Private	1,992
Asbury College, Wilmore, Ky	2	Coed	Private	1,000
Asheville-Biltmore College, Asheville, N.C	2	Coed	Public	594
Ashland College, Ashland, Ohio	2	Coed	Pvt-Brethren	2,036
Assumption College, Worcester, Mass	3	M	Pvt-Roman Catholic	1,215
Athenaeum of Ohio, The, Cincinnati, Ohio	3	M	Pvt-Roman Catholic	566
Athens College, Athens, Ala	2	Coed	Pvt-Methodist	1,343
Atlanta University, Atlanta, Ga	3	Coed	Private	843
Atlantic Christian College, Wilson, N.C	2	Coed	Pvt-Disciples of Christ	1,447
Atlantic Union College, South Lancaster, Mass	2	Coed	Pvt-Seventh-day Adventist	798
Auburn Community College, Auburn, N.Y	1	Coed	Public	2,831
Auburn University, Auburn, Ala	4	Coed	Public	11,875
Augsburg College, Minneapolis, Minn	2	Coed	Pvt-Lutheran	1,702
Augusta College, Augusta, Ga	1	Coed	Public	1,785
Augustana College, Rock Island, Ill	2	Coed	Pvt-Lutheran	1,875
Augustana College, Sioux Falls, S.Dak	2	Coed	Pvt-Lutheran	2,000
Aurora College, Aurora, Ill	2	Coed	Pvt-Adventist Christian	1,554
Austin College, Sherman, Texas	3	Coed	Pvt-Presbyterian	1,070
Austin Peay State College, Clarksville, Tenn	3	Coed	Public	2,471
Averett College, Danville, Va	1	W	Pvt-Baptist	544
Avila College, Kansas City, Mo	2	W	Pvt-Roman Catholic	325
Azusa Pacific College, Azusa, Calif	2	Coed	Private	602
Babson Institute of Business Administration, Babson Park, Mass	3	M	Private	1,010
Bacone College, Bacone, Okla	1	Coed	Pvt-Baptist	539
Baker University, Baldwin City, Kans	2	Coed	Pvt-Methodist	892
Bakersfield College, Bakersfield, Calif	1	Coed	Public	7,511
Baldwin-Wallace College, Berea, Ohio	2	Coed	Pvt-Methodist	2,874
Ball State University, Muncie, Ind	4	Coed	Public	11,466
Baltimore College of Commerce, Baltimore, Md	2	Coed	Pvt-YMCA	1,018
Baltimore Junior College, Baltimore, Md	1	Coed	Public	3,031
Bank Street College of Education, New York, N.Y	3	Coed	Private	694
Barat College of the Sacred Heart, Lake Forest, Ill	2	W	Pvt-Roman Catholic	485
Barber-Scotia College, Concord, N.C	2	Coed	Pvt-Presbyterian	363
Bard College, Annandale-on-Hudson, N.Y	2	Coed	Private	601
Barnard College (of Columbia University), New York, N.Y.	2	W	Private	...[1]
Barrington College, Barrington, R.I	2	Coed	Private	653
Barry College, Miami, Fla	3	W	Pvt-Roman Catholic	1,072

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Barstow College, Barstow, Calif.	1	Coed	Public	870
Bates College, Lewiston, Me.	2	Coed	Private	900
Bay Path Junior College, Longmeadow, Mass.	1	W	Private	437
Baylor University, Waco, Texas	4	Coed	Pvt-Baptist	7,108
Beaver College, Glenside, Pa.	2	W	Pvt-Presbyterian	777
Becker Junior College, Worcester, Mass.	1	Coed	Private	635
Belhaven College, Jackson, Miss.	3	Coed	Pvt-Presbyterian	596
Bellarmine College, Louisville, Ky.	2	M	Pvt-Roman Catholic	1,754
Belleville Junior College, Belleville, Ill.	1	Coed	Public	3,448
Belmont Abbey College, Belmont, N.C.	2	M	Pvt-Roman Catholic	705
Belmont College, Nashville, Tenn.	2	Coed	Pvt-Baptist	1,074
Beloit College, Beloit, Wis.	3	Coed	Private	1,172
Bemidji State College, Bemidji, Minn.	3	Coed	Public	3,410
Benedict College, Columbia, S.C.	2	Coed	Pvt-Baptist	1,100
Bennett College, Millbrook, N.Y.	1	W	Private	348
Bennett College, Greensboro, N.C.	2	W	Pvt-Methodist	642
Bennington College, Bennington, Vt.	3	W	Private	385
Berea College, Berea, Ky.	2	Coed	Private	1,399
Berkshire Community College, Pittsfield, Mass.	1	Coed	Public	1,289
Berry College, Mount Berry, Ga.	2	Coed	Private	1,100
Bethany Bible College, Santa Cruz, Calif.	2	Coed	Pvt-Assemblies of God	405
Bethany College, Lindsborg, Kans.	2	Coed	Pvt-Lutheran	478
Bethany College, Bethany, W.Va.	2	Coed	Private	1,007
Bethany-Nazarene College, Bethany, Okla.	3	Coed	Pvt-Nazarene	1,678
Bethel College, North Newton, Kans.	2	Coed	Pvt-Mennonite	588
Bethel College, McKenzie, Tenn.	2	Coed	Pvt-Presbyterian	789
Bethel College & Seminary, St. Paul, Minn.	2	Coed	Pvt-Baptist	1,104
Bethune-Cookman College, Daytona Beach, Fla.	2	Coed	Private	943
Big Bend Community College, Moses Lake, Wash.	1	Coed	Public	1,417
Biola College, La Mirada, Calif.	2	Coed	Private	1,391
Birmingham-Southern College, Birmingham, Ala.	3	Coed	Pvt-Methodist	949
Bishop College, Dallas, Texas	2	Coed	Pvt-Baptist	1,348
Bishop's University, Lennoxville, Quebec	3	Coed	Pvt-Anglican	731
Bismarck Junior College, Bismarck, N.Dak.	1	Coed	Public	856
Black Hawk College, Moline, Ill.	1	Coed	Public	3,007
Black Hills State College, Spearfish, S.Dak.	3	Coed	Public	2,507
Blackburn College, Carlinville, Ill.	2	Coed	Private	485
Blinn College, Brenham, Texas	1	Coed	Public	1,150
Bliss College, Columbus, Ohio	2	Coed	Private	774
Bloom Community College, Chicago Heights, Ill.	1	Coed	Public	1,377
Bloomfield College, Bloomfield, N.J.	2	Coed	Pvt-Presbyterian	1,224
Bloomsburg State College, Bloomsburg, Pa.	3	Coed	Public	3,089
Blue Mountain College, Blue Mountain, Miss.	2	W	Pvt-Baptist	355
Bluefield College, Bluefield, Va.	1	Coed	Pvt-Baptist	463
Bluefield State College, Bluefield, W.Va.	2	Coed	Public	1,352
Bluffton College, Bluffton, Ohio	2	Coed	Pvt-Mennonite	608
Boise College, Boise, Idaho	1	Coed	Public	3,461
Boston College, Chestnut Hill, Mass.	4	Coed	Pvt-Roman Catholic	9,526
Boston Conservatory of Music, Boston, Mass.	3	Coed	Private	366
Boston University, Boston, Mass.	4	Coed	Private	22,328
Bowdoin College, Brunswick, Me.	3	M	Private	891
Bowie State College, Bowie, Md.	2	Coed	Public	626
Bowling Green State University, Bowling Green, Ohio	4	Coed	Public	11,293
Bradford Junior College, Bradford, Mass.	1	W	Private	423
Bradley University, Peoria, Ill.	3	Coed	Private	5,941
Brandeis University, Waltham, Mass.	4	Coed	Private	2,090
Brandon College (of the University of Manitoba), Brandon, Man.	2	Coed	Private	656
Brenau College, Gainesville, Ga.	2	W	Private	628
Brescia College, Owensboro, Ky.	2	Coed	Pvt-Roman Catholic	1,054
Brevard College, Brevard, N.C.	1	Coed	Pvt-Methodist	527
Brevard Junior College, Cocoa, Fla.	1	Coed	Public	3,660
Brewton-Parker College, Mount Vernon, Ga.	1	Coed	Pvt-Baptist	456
Briar Cliff College, Sioux City, Iowa	2	Coed	Pvt-Roman Catholic	733
Briarcliff College, Briarcliff Manor, N.Y.	2	W	Private	536

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Bridgeport, University of, Bridgeport, Conn.	3	Coed	Private	7,938
Bridgewater College, Bridgewater, Va.	2	Coed	Pvt-Brethren	779
Brigham Young University, Provo, Utah	4	Coed	Pvt-Latter-day Saints	19,979
British Columbia, University of, Vancouver, B.C.	4	Coed	Public	15,966
Bronx Community College (of the City University of New York), Bronx, N.Y.	1	Coed	Public	6,648
Brooklyn, Polytechnic Institute of, Brooklyn, N.Y.	4	Coed	Private	5,662
Brooklyn College (of the City University of New York), Brooklyn, N.Y.	3	Coed	Public	24,875
Brooklyn Law School, Brooklyn, N.Y.	3	Coed	Private	1,401
Broome Technical Community College, Binghamton, N.Y.	1	Coed	Public	3,266
Broward County, Junior College of, Fort Lauderdale, Fla.	1	Coed	Public	3,996
Brown University, Providence, R.I. (incl. Pembroke College)	4	Coord	Private	4,808
Bryant College, Providence, R.I.	2	Coed	Private	2,749
Bryn Mawr College, Bryn Mawr, Pa.	4	W	Private	1,097
Bucknell University, Lewisburg, Pa.	3	Coed	Private	2,658
Buena Vista College, Storm Lake, Iowa	2	Coed	Pvt-Presbyterian	1,010
Burdett College, Boston, Mass.	1	Coed	Private	1,364
Burlington Community College, Burlington, Iowa	1	Coed	Public	955
Butler University, Indianapolis, Ind.	3	Coed	Private	4,519
Cabrillo College, Aptos, Calif.	1	Coed	Public	2,831
Cabrini College, Radnor, Pa.	2	W	Pvt-Roman Catholic	370
Caldwell College for Women, Caldwell, N.J.	2	W	Pvt-Roman Catholic	845
California, University of, Berkeley, Los Angeles, San Francisco, Santa Barbara, Davis, Riverside, San Diego, Calif. Santa Cruz, Irvine, California College of Medicine, Hastings College, San Francisco Art Institute College	4	Coed	Public	119,465
California Baptist College, Riverside, Calif.	2	Coed	Pvt-Baptist	593
California College of Arts & Crafts, Oakland, Calif.	3	Coed	Private	972
California College of Medicine, Los Angeles, Calif.	2	Coed	Private	352
California Institute of Technology, Pasadena, Calif.	4	M	Private	1,430
California Institute of the Arts, Los Angeles, Calif.	3	Coed	Private	801
California Lutheran College, Thousand Oaks, Calif.	2	Coed	Pvt-Lutheran	863
California State College, California, Pa.	3	Coed	Public	4,443
California State College at Fullerton, Calif.	3	Coed	Public	6,695
California State College at Hayward, Calif.	3	Coed	Public	4,850
California State College at Long Beach, Calif.	3	Coed	Public	19,363
California State College at Los Angeles, Calif.	3	Coed	Public	21,294
California State College at San Bernardino, Calif.	2	Coed	Public	450
California State Polytechnic College, San Luis Obispo & Pomona, Calif.	3	Coed	Public	12,501
California Western University, San Diego, Calif.	3	Coed	Pvt-Methodist	1,849
Calvin College, Grand Rapids, Mich.	2	Coed	Pvt-Christian Reformed	2,942
Cameron State Agricultural College, Lawton, Okla.	1	Coed	Public	2,381
Campbell College, Buies Creek, N.C.	2	Coed	Pvt-Baptist	2,165
Campbellsville College, Campbellsville, Ky.	2	Coed	Pvt-Baptist	972
Canal Zone College, Balboa Heights, C.Z.	1	Coed	Public	1,353
Canisius College, Buffalo, N.Y.	3	Coed	Pvt-Roman Catholic	2,937
Capital University, Columbus, Ohio	2	Coed	Pvt-Lutheran	1,755
Cardinal Cushing College, Fisher, Mass.	2	W	Pvt-Roman Catholic	329
Cardinal Stritch College, Milwaukee, Wis.	3	W	Pvt-Roman Catholic	528
Carleton College, Northfield, Minn.	2	Coed	Private	1,351
Carleton University, Ottawa, Ontario	4	Coed	Private	3,024
Carnegie Institute of Technology, Pittsburgh, Pa. (incl. Margaret Morrison Carnegie College)	4	Coed	Private	5,162
Carroll College, Helena, Mont.	2	Coed	Pvt-Roman Catholic	906
Carroll College, Waukesha, Wis.	2	Coed	Pvt-Presbyterian	1,041
Carson-Newman College, Jefferson City, Tenn.	2	Coed	Pvt-Baptist	1,699
Carthage College, Kenosha, Wis.	2	Coed	Pvt-Lutheran	1,910
Cascade College, Portland, Oreg.	2	Coed	Private	335
Case Institute of Technology, Cleveland, Ohio	4	Coed	Private	2,613
Casper College, Casper, Wyo.	1	Coed	Public	2,270

Name and Location	*Level of Instruction*	*Student Body*	*Control*	*Enrollment*
Castleton State College, Castleton, Vt.	2	Coed	Public	747
Catawba College, Salisbury, N.C.	2	Coed	Pvt-United Church of Christ	897
Catherine Spalding College, Louisville, Ky.	3	W	Pvt-Roman Catholic	1,594
Catholic University of America, Washington, D.C.	4	Coord	Pvt-Roman Catholic	6,193
Catholic University of Puerto Rico, Ponce, P.R.	2	Coed	Pvt-Roman Catholic	5,335
Catonsville Community College, Catonsville, Md.	1	Coed	Public	1,538
Cazenovia College, Cazenovia, N.Y.	1	W	Private	481
Cedar Crest College, Allentown, Pa.	2	W	Pvt-Evangelical Reformed	598
Centenary College, Shreveport, La.	2	Coed	Pvt-Methodist	1,490
Centenary College for Women, Hackettstown, N.J.	2	W	Pvt-Methodist	666
Central Bible Institute, Springfield, Mo.	3	Coed	Pvt-Assemblies of God	572
Central College, Pella, Iowa	2	Coed	Pvt-Episcopal	865
Central Connecticut State College, New Britain, Conn.	3	Coed	Public	7,046
Central Florida Junior College, Ocala, Fla.	1	Coed	Public	1,343
Central Methodist College, Fayette, Mo.	2	Coed	Pvt-Methodist	935
Central Michigan University, Mt. Pleasant, Mich.	3	Coed	Public	9,781
Central Missouri State College, Warrensburg, Mo.	3	Coed	Public	9,825
Central Oregon College, Astoria, Ore.	1	Coed	Public	845
Central State University, Wilberforce, Ohio	3	Coed	Public	2,255
Central State College, Edmond, Okla.	3	Coed	Public	8,060
Central Washington State College, Ellensburg, Wash.	3	Coed	Public	5,567
Centralia College, Centralia, Wash.	1	Coed	Public	1,493
Centre College of Kentucky, Danville, Ky.	2	Coed	Private	662
Cerritos College, Norwalk, Calif.	1	Coed	Public	11,422
Chabot College, San Leandro, Calif.	1	Coed	Public	7,221
Chadron State College, Chadron, Nebr.	3	Coed	Public	1,835
Chaffey College, Alta Loma, Calif.	1	Coed	Public	6,140
Chaminade College of Honolulu, Hawaii	2	Coed	Pvt-Roman Catholic	549
Champlain College, Burlington, Vt.	1	Coed	Private	581
Chapman College, Orange, Calif.	3	Coed	Pvt-Disciples of Christ	2,057
Charleston, College of, Charleston, S.C.	2	Coed	Private	387
Chatham College, Pittsburgh, Pa.	2	W	Private	655
Chattanooga, University of, Chattanooga, Tenn.	3	Coed	Private	3,059
Chestnut Hill College, Philadelphia, Pa.	2	W	Pvt-Roman Catholic	1,046
Cheyney State College, Cheyney, Pa.	2	Coed	Public	1,528
Chicago, University of, Chicago, Ill.	4	Coed	Private	9,981
Chicago City Junior College, Chicago, Ill.	1	Coed	Public	37,359
Chicago-Kent College of Law, Chicago, Ill.	2	Coed	Private	527
Chico State College, Chico, Calif.	3	Coed	Public	6,318
Chipola Junior College, Marianna, Fla.	1	Coed	Public	1,369
Chowan College, Murfreesboro, N.C.	1	Coed	Pvt-Baptist	1,179
Christian Brothers College, Memphis, Tenn.	2	M	Pvt-Roman Catholic	950
Christian College, Columbia, Mo.	1	W	Pvt-Disciples of Christ	467
Cincinnati, University of, Cincinnati, Ohio	4	Coed	Public	24,512
Cisco Junior College, Cisco, Texas	1	Coed	Public	810
Citadel, The, Charleston, S.C.	2	M	Public	2,033
Citrus Junior College, Azusa, Calif.	1	Coed	Public	6,156
City College (of the City University of New York), New York, N.Y.	3	Coord	Public	29,912
Claflin College, Orangeburg, S.C.	2	Coed	Pvt-Methodist	711
Claremont Graduate School & University Center, Claremont, Calif.	4	Coed	Private	1,044
Claremont Men's College, Claremont, Calif.	2	M	Private	649
Clarion State College, Clarion, Pa.	2	Coed	Public	3,028
Clark College, Atlanta, Ga.	2	Coed	Pvt-Methodist	923
Clark College, Vancouver, Wash.	1	Coed	Public	3,688
Clark University, Worcester, Mass.	4	Coed	Private	2,334
Clarke College, Dubuque, Iowa	2	W	Pvt-Roman Catholic	1,018
Clarke Memorial College, Newton, Miss.	1	Coed	Pvt-Baptist	375
Clarkson College of Technology, Potsdam, N.Y.	4	Coed	Private	2,067
Clatsop Community College, Astoria, Ore.	1	Coed	Public	495
Clemson University, Clemson, S.C.	4	Coed	Public	5,022
Cleveland-Marshall Law School (of Baldwin-Wallace College, Berea), Cleveland, Ohio	3	Coed	Private	647
Cleveland State University, Cleveland, Ohio	2	Coed	Public	6,992
Coalinga College, Coalinga, Calif.	1	Coed	Public	1,291
Coe College, Cedar Rapids, Iowa	2	Coed	Private	1,284
Coker College, Hartsville, S.C.	2	W	Private	348
Colby College, Waterville, Me.	2	Coord	Private	1,450
Colby Junior College for Women, New London, N.H.	2	W	Private	604
Colgate University, Hamilton, N.Y.	3	M	Private	1,715
Colorado, University of, Boulder, Colo.	4	Coed	Public	23,869
Colorado College, Colorado Springs, Colo.	3	Coed	Private	1,551
Colorado School of Mines, Golden, Colo.	4	Coed	Public	1,442
Colorado State College, Greeley, Colo.	4	Coed	Public	6,589
Colorado State University, Fort Collins, Colo.	4	Coed	Public	11,848
Colorado Woman's College, Denver, Colo.	2	W	Pvt-Baptist	950
Columbia Basin College, Pasco, Wash.	1	Coed	Public	2,594
Columbia College, Columbia, S.C.	2	W	Pvt-Methodist	857
Columbia Union College, Takoma Park, Md.	2	Coed	Pvt-Seventh-day Adventist	1,018
Columbia University, New York, N.Y. (incl. Barnard and Columbia University Teachers colleges, qq.v., Columbia College, New York School of Social Work)	4	Coed	Private	25,154
Columbia University Teachers College, New York, N.Y.	4	Coed	Private	...[1]
Columbus College, Columbus, Ga.	1	Coed	Public	1,284
Compton District Junior College, Compton, Calif.	1	Coed	Public	5,051
Concord College, Athens, W. Va.	2	Coed	Public	2,014
Concordia College, Moorhead, Minn.	2	Coed	Pvt-Lutheran	2,101
Concordia College, St. Paul, Minn.	2	Coed	Pvt-Lutheran	635
Concordia Collegiate Institute, Bronxville, N.Y.	1	Coed	Pvt-Lutheran	455
Concordia Seminary, St. Louis, Mo.	4	Coord	Pvt-Lutheran	703
Concordia Senior College, Fort Wayne, Ind.	2	M	Pvt-Lutheran	452
Concordia Teachers College, River Forest, Ill.	3	Coed	Pvt-Lutheran	1,271
Concordia Teachers College, Seward, Nebr.	2	Coed	Pvt-Lutheran	1,259
Connecticut, University of, Storrs, Conn.	4	Coed	Public	15,223
Connecticut College, New London, Conn.	3	W	Private	1,543
Connors State Agricultural College, Warner, Okla.	1	Coed	Public	553
Contra Costa College, San Pablo, Calif.	1	Coed	Public	5,139
Converse College, Spartanburg, S.C.	3	W	Private	782
Cooke County Junior College, Gainesville, Texas	1	Coed	Public	1,025
Cooper Union, New York, N.Y.	2	Coed	Private	1,314
Copiah-Lincoln Junior College, Wesson, Miss.	1	Coed	Public	649
Coppin State College, Baltimore, Md.	2	Coed	Public	728
Cornell College, Mount Vernon, Iowa	2	Coed	Private	961
Cornell University, Ithaca, N.Y.	4	Coed	Public-Private	14,387
Corning Community College, Corning, N.Y.	1	Coed	Public	2,596
Cottey College, Nevada, Mo.	1	W	Private	363
Creighton University, Omaha, Nebr.	3	Coed	Pvt-Roman Catholic	3,891
Culver-Stockton College, Canton, Mo.	2	Coed	Pvt-Disciples of Christ	793
Cumberland College, Williamsburg, Ky.	2	Coed	Pvt-Baptist	1,312
Dakota Wesleyan University, Mitchell, S.Dak.	2	Coed	Pvt-Methodist	729
Dalhousie University, Halifax, Nova Scotia (incl. University of King's College)	3	Coed	Private	3,485
Dallas, University of, Dallas, Texas	2	Coed	Pvt-Roman Catholic	840
Dana College, Blair, Nebr.	2	Coed	Pvt-Lutheran	818
Danbury State College, Danbury, Conn.	3	Coed	Public	2,195
Daniel Payne College, Birmingham, Ala.	4	Coed	Pvt-Methodist Episcopal	360
Dartmouth College, Hanover, N.H.	4	M	Private	3,688
David Lipscomb College, Nashville, Tenn.	2	Coed	Pvt-Church of Christ	1,827
Davidson College, Davidson, N.C.	2	M	Pvt-Presbyterian	1,001
Davis and Elkins College, Elkins, W.Va.	2	Coed	Pvt-Presbyterian	689
Dayton, University of, Dayton, Ohio	3	Coed	Pvt-Roman Catholic	9,620
Daytona Beach Junior College, Daytona Beach, Fla.	1	Coed	Public	2,364
Dean Junior College, Franklin, Mass.	1	Coed	Private	960
Defiance College, Defiance, Ohio	2	Coed	Private	1,024
Delaware, University of, Newark, Del.	4	Coed	Public	10,051
Delaware State College, Dover, Del.	2	Coed	Public	814
Delaware Valley College of Science & Agriculture, Doylestown, Pa.	2	M	Private	905

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Del Mar College, Corpus Christi, Texas	1	Coed	Public	3,397
Delta State College, Cleveland, Miss	2	Coed	Public	1,765
Denison University, Granville, Ohio	2	Coed	Private	1,702
Denver, University of, Denver, Colo	4	Coed	Pvt-Methodist	7,874
DePaul University, Chicago, Ill	3	Coed	Pvt-Roman Catholic	9,758
DePauw University, Greencastle, Ind	3	Coed	Private	2,420
Desert, College of the, Palm Desert, Calif	1	Coed	Public	1,734
Detroit, University of, Detroit, Mich	4	Coed	Pvt-Roman Catholic	9,182
Detroit Bible College, Detroit, Mich	2	Coed	Private	413
Detroit College of Law, Detroit, Mich	2	Coed	Private	647
Detroit Institute of Technology, Detroit, Mich	2	Coord	Private	2,507
Diablo Valley College, Concord, Calif	1	Coed	Public	9,914
Dickinson College, Carlisle, Pa	2	Coed	Private	1,408
Dickinson State College, Dickinson, N.Dak	2	Coed	Public	1,333
Dillard University, New Orleans, La	2	Coed	Private	864
District of Columbia Teachers College, Washington, D.C.	2	Coed	Public	1,444
Dixie Junior College, St. George, Utah	1	Coed	Public	891
Doane College, Crete, Nebr	2	Coed	Pvt-United Church	542
Dodge City Community Junior College, Dodge City, Kans.	1	Coed	Public	667
Dominican College, Racine, Wis	2	Coed	Pvt-Roman Catholic	634
Dominican College of San Rafael, San Rafael, Calif	3	W	Pvt-Roman Catholic	832
Donnelly College, Kansas City, Kans	1	Coed	Pvt-Roman Catholic	1,008
Douglass College (of Rutgers University), New Brunswick, N.J	2	W	Public	...[2]
Drake University, Des Moines, Iowa	3	Coed	Private	7,918
Drew University, Madison, N.J	4	Coed	Pvt-Methodist	1,427
Drexel Institute of Technology, Philadelphia, Pa	3	Coed	Private	9,491
Drury College, Springfield, Mo	3	Coed	Private	1,358
Dubuque, University of, Dubuque, Iowa	2	Coed	Pvt-Presbyterian	985
Duchesne College of the Sacred Heart, Omaha, Nebr.	2	W	Pvt-Roman Catholic	455
Duke University, Durham, N.C. (incl. Trinity College & Woman's College)	4	Coord	Private	6,952
Dunbarton College of Holy Cross, Washington, D.C	2	W	Pvt-Roman Catholic	544
Duquesne University, Pittsburgh, Pa	4	Coed	Pvt-Roman Catholic	7,114
Dutchess Community College, Poughkeepsie, N.Y	1	Coed	Public	3,187
Dyke College, Cleveland, Ohio	2	Coed	Private	933
D'Youville College, Buffalo, N.Y	2	W	Pvt-Roman Catholic	975
Earlham College, Richmond, Ind	3	Coed	Pvt-Friends	1,147
East Carolina College, Greenville, N.C	3	Coed	Public	9,172
East Central Junior College, Decatur, Miss	1	Coed	Public	638
East Central State College, Ada, Okla	3	Coed	Public	2,736
East Los Angeles College, Los Angeles, Calif	1	Coed	Public	9,804
East Stroudsburg State College, East Stroudsburg, Pa	3	Coed	Public	2,148
East Tennessee State University, Johnson City, Tenn	3	Coed	Public	8,205
East Texas Baptist College, Marshall, Texas	2	Coed	Pvt-Baptist	666
East Texas State University, Commerce, Texas	4	Coed	Public	7,257
Eastern Arizona Junior College, Thatcher, Ariz	1	Coed	Public	890
Eastern Baptist College, St. Davids, Pa	2	Coed	Pvt-Baptist	513
Eastern Illinois University, Charleston, Ill	3	Coed	Public	5,569
Eastern Kentucky University, Richmond, Ky	3	Coed	Public	6,949
Eastern Mennonite College, Harrisonburg, Va	2	Coed	Pvt-Mennonite	708
Eastern Michigan University, Ypsilanti, Mich	3	Coed	Public	12,442
Eastern Montana College, Billings, Mont	3	Coed	Public	2,644
Eastern Nazarene College, Wollaston, Mass	2	Coed	Pvt-Nazarene	845
Eastern New Mexico University, Portales, N.Mex	3	Coed	Public	4,902
Eastern Oklahoma Agricultural & Mechanical College, Wilburton, Okla	1	Coed	Public	1,116
Eastern Oregon College, La Grande, Oreg	3	Coed	Public	1,358
Eastern Washington State College, Cheney, Wash	3	Coed	Public	4,323
Edgewood College of the Sacred Heart, Madison, Wis.	2	W	Pvt-Roman Catholic	657
Edinboro State College, Edinboro, Pa	3	Coed	Public	3,482
Edison Junior College, Fort Meyers, Fla	1	Coed	Public	953
El Camino College, El Camino College, Calif	1	Coed	Public	15,023
Elizabeth City State College, Elizabeth City, N.C	2	Coed	Public	1,013
Elizabeth Seton College, Yonkers, N.Y	2	W	Pvt-Roman Catholic	363
Elizabethtown College, Elizabethtown, Pa	2	Coed	Pvt-Brethren	1,800
Ellsworth Junior College, Iowa Falls, Iowa	1	Coed	Public	831
Elmhurst College, Elmhurst, Ill	2	Coed	Pvt-Church of God	2,559
Elmira College, Elmira, N.Y	3	W	Private	2,138
Elon College, Elon College, N.C	2	Coed	Private	1,344
Emerson College, Boston, Mass	3	Coed	Private	1,053
Emmanuel College, Boston, Mass	3	W	Pvt-Roman Catholic	1,329
Emory & Henry College, Emory, Va	2	Coed	Pvt-Methodist	859
Emory University, Atlanta & Oxford, Ga	4	Coed	Pvt-Methodist	5,149
Emporia, College of, Emporia, Kans	2	Coed	Pvt-Presbyterian	806
Endicott Junior College, Beverly, Mass	1	W	Private	733
Erie County Technical Institute, Buffalo, N.Y	1	Coed	Public	5,582
Erskine College, Due West, S.C	2	Coed	Pvt-Presbyterian	773
Essex Community College, Essex, Md	1	Coed	Public	835
Eureka College, Eureka, Ill	2	Coed	Pvt-Disciples of Christ	445
Evangel College, Springfield, Mo	2	Coed	Pvt-Assemblies of God	753
Evansville College, Evansville, Ind	3	Coed	Private	4,812
Everett Junior College, Everett, Wash	1	Coed	Public	4,603
Fairfield University, Fairfield, Conn	3	M	Pvt-Roman Catholic	2,294
Fairleigh Dickinson University, Rutherford, Teaneck, Madison, N.J	3	Coed	Private	18,968
Fairmont State College, Fairmont, W.Va	2	Coed	Public	2,222
Farmington State College, Farmington, Me	2	Coed	Public	615
Fashion Institute of Technology, New York, N.Y	1	Coed	Public	4,552
Fayetteville State College, Fayetteville, N.C	2	Coed	Public	1,196
Ferris State College, Big Rapids, Mich	2	Coed	Public	6,072
Ferrum Junior College, Ferrum, Va	1	Coed	Pvt-Methodist	1,079
Findlay College, Findlay, Ohio	2	Coed	Pvt-Church of God	1,229
Fisher Junior College, Boston, Mass	1	W	Private	507
Fisk University, Nashville, Tenn	3	Coed	Private	1,027
Flint Community Junior College, Flint, Mich	1	Coed	Public	6,378
Florence State College, Florence, Ala	3	Coed	Public	2,498
Florida, University of, Gainesville, Fla	4	Coed	Public	17,274
Florida Agricultural & Mechanical University, Tallahassee, Fla	3	Coed	Public	3,807
Florida College, Temple Terrace, Fla	1	Coed	Private	426
Florida Institute of Technology, Melbourne, Fla	3	Coed	Private	1,047
Florida Memorial College, St. Augustine, Fla	2	Coed	Private	427
Florida Southern College, Lakeland, Fla	2	Coed	Pvt-Methodist	2,157
Florida State University, Tallahassee, Fla	4	Coed	Public	13,200
Fontbonne College, St. Louis, Mo	2	W	Pvt-Roman Catholic	953
Foothill College, Los Altos Hills, Calif	1	Coed	Public	10,255
Fordham University, New York, N.Y	4	Coed	Pvt-Roman Catholic	9,980
Fort Hays Kansas State College, Hays, Kans	3	Coed	Public	4,768
Fort Lewis College, Durango, Colo	2	Coed	Public	1,360
Fort Valley State College, Fort Valley, Ga	3	Coed	Public	1,556
Fort Wayne Bible College, Fort Wayne, Ind	2	Coed	Private	520
Fort Wright College of the Holy Names, Spokane, Wash.	2	W	Pvt-Roman Catholic	493
Francis T. Nicholls State College, Thibodaux, La	2	Coed	Public	2,657
Frank Phillips College, Borger, Texas	1	Coed	Public	731
Franklin & Marshall College, Lancaster, Pa	3	M	Private	2,163
Franklin College of Indiana, Franklin, Ind	2	Coed	Pvt-Baptist	665
Freed-Hardeman College, Henderson, Tenn	1	Coed	Private	734
Fresno City College, Fresno, Calif	1	Coed	Public	7,881
Fresno State College, Fresno, Calif	3	Coed	Public	11,349
Friends University, Wichita, Kans	2	Coed	Pvt-Friends	715
Frostburg State College, Frostburg, Md	3	Coed	Public	2,024
Fullerton Junior College, Fullerton, Calif	1	Coed	Public	13,125
Furman University, Greenville, S.C	3	Coed	Pvt-Baptist	1,617
Gallaudet College, Washington, D.C	3	Coed	Private	600
Gannon College, Erie, Pa	3	M	Pvt-Roman Catholic	2,670
Gardner-Webb Junior College, Boiling Springs, N.C	1	Coed	Pvt-Baptist	1,119

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Garland Junior College, Boston, Mass.	1	W	Private	378
Gavilan College, Gilroy, Calif.	1	Coed	Public	524
General Beadle State College, Madison, S.Dak.	2	Coed	Public	967
General Motors Institute, Flint, Mich.	2	Coed	Private	2,908
Geneva College, Beaver Falls, Pa.	2	Coed	Pvt-Presbyterian	1,730
George Fox College, Newberg, Oreg.	2	Coed	Pvt-Friends	351
George Peabody College for Teachers, Nashville, Tenn.	4	Coed	Private	2,117
George Washington University, Washington, D.C.	4	Coed	Private	15,813
George Williams College, Chicago, Ill.	3	Coed	Private	583
Georgetown College, Georgetown, Ky.	3	Coed	Pvt-Baptist	1,408
Georgetown University, Washington, D.C.	4	Coord	Pvt-Roman Catholic	7,676
Georgia, Medical College of, Augusta, Ga.	3	Coed	Public	597
Georgia, University of, Athens, Ga.	4	Coed	Public	17,488
Georgia, Woman's College of, Milledgeville, Ga.	3	W	Public	1,107
Georgia Institute of Technology, Atlanta, Ga.	4	Coed	Public	8,542
Georgia Southern College, Statesboro, Ga.	3	Coed	Public	3,654
Georgia Southwestern College, Americus, Ga.	1	Coed	Public	1,197
Georgia State College, Atlanta, Ga.	3	Coed	Public	7,467
Georgian Court College, Lakewood, N.J.	2	W	Pvt-Roman Catholic	514
Gettysburg College, Gettysburg, Pa.	2	Coed	Pvt-Lutheran	1,873
Glassboro State College, Glassboro, N.J.	3	Coed	Public	6,221
Glendale College, Glendale, Calif.	1	Coed	Public	3,483
Glenville State College, Glenville, W.Va.	2	Coed	Public	1,313
Goddard College, Plainfield, Vt.	2	Coed	Private	550
Gogebic Community College, Ironwood, Mich.	1	Coed	Public	377
Golden Gate College, San Francisco, Calif.	3	Coed	Private	2,341
Gonzaga University, Spokane, Wash.	3	Coed	Pvt-Roman Catholic	2,605
Good Counsel College, White Plains, N.Y.	2	W	Pvt-Roman Catholic	515
Gordon College, Wenham, Mass.	2	Coed	Private	828
Gordon Military College, Barnesville, Ga.	1	M	Private	478
Gorham State College, Gorham, Me.	2	Coed	Public	1,358
Goshen College, Goshen, Ind.	2	Coed	Pvt-Mennonite	1,220
Goucher College, Baltimore, Md.	3	W	Private	1,021
Grace Bible Institute, Omaha, Nebr.	2	Coed	Private	384
Graceland College, Lamoni, Iowa	2	Coed	Pvt-Latter-day Saints	1,055
Grambling College, Grambling, La.	2	Coed	Public	3,784
Grand Rapids Baptist Bible College and Seminary, Grand Rapids, Mich.	2	Coed	Pvt-Baptist	383
Grand Rapids Junior College, Grand Rapids, Mich.	1	Coed	Public	4,174
Grand View College, Des Moines, Iowa	1	Coed	Pvt-Lutheran	1,277
Grays Harbor College, Aberdeen, Wash.	1	Coed	Public	1,082
Great Falls, College of, Great Falls, Mont.	2	Coed	Pvt-Roman Catholic	800
Greenfield Community College, Greenfield, Mass.	1	Coed	Public	635
Green Mountain College, Poultney, Vt.	1	W	Private	635
Greensboro College, Greensboro, N.C.	2	Coed	Pvt-Methodist	648
Greenville College, Greenville, Ill.	2	Coed	Pvt-Methodist	783
Grinnell College, Grinnell, Iowa	2	Coed	Private	1,168
Grossmont College, El Cajon, Calif.	1	Coed	Public	6,273
Grove City College, Grove City, Pa.	2	Coed	Private	1,885
Guam, College of, Agana, Guam	2	Coed	Private	1,624
Guelph, University of, Guelph, Ont.	4	Coed	Public	2,093
Guilford College, Guilford College, N.C.	3	Coed	Pvt-Friends	2,142
Gulf Coast Junior College, Panama City, Fla.	1	Coed	Public	1,352
Gulf Park College, Gulfport, Miss.	1	W	Private	337
Gustavus Adolphus College, St. Peter, Minn.	2	Coed	Pvt-Lutheran	1,581
Gwynedd-Mercy College, Gwynedd Valley, Pa.	2	W	Pvt-Roman Catholic	1,074
Hahnemann Medical College, Philadelphia, Pa.	4	Coed	Private	689
Hamilton College, Clinton, N.Y.	2	M	Private	831
Hamline University, St. Paul, Minn.	3	Coed	Pvt-Methodist	1,154
Hampden-Sydney College, Hampden-Sydney, Va.	2	M	Pvt-Presbyterian	543
Hampton Institute, Hampton, Va.	3	Coed	Private	2,055
Hannibal-La Grange College, Hannibal, Mo.	1	Coed	Pvt-Baptist	750
Hanover College, Hanover, Ind.	2	Coed	Pvt-Presbyterian	1,062
Hardin-Simmons University, Abilene, Texas	3	Coed	Pvt-Baptist	1,814
Harding College, Searcy, Ark.	3	Coed	Pvt-Church of Christ	1,582
Harris Teachers College, St. Louis, Mo.	2	Coed	Public	1,233
Hartford, University of, Hartford, Conn.	3	Coed	Private	11,222
Hartnell College, Salinas, Calif.	1	Coed	Public	2,990
Hartwick College, Oneonta, N.Y.	2	Coed	Pvt-Lutheran	1,336
Harvard University, Cambridge, Mass.	4	M	Private	13,411
Hastings College, Hastings, Nebr.	2	Coed	Pvt-Presbyterian	805
Haverford College, Haverford, Pa.	2	M	Private	524
Hawaii, Church College of, Laie, Oahu, Hawaii	2	Coed	Pvt-Latter-day Saints	985
Hawaii, University of, Honolulu, Hawaii	4	Coed	Public	17,486
Hebrew Union College-Jewish Institute of Religion, Cincinnati, Ohio	4	M	Pvt-Jewish	800
Heidelberg College, Tiffin, Ohio	2	Coed	Pvt-Evangelical Reformed	1,116
Henderson County Junior College, Athens, Texas	1	Coed	Public	1,000
Henderson State Teachers College, Arkadelphia, Ark.	3	Coed	Public	2,495
Hendrix College, Conway, Ark.	2	Coed	Pvt-Methodist	757
Henry Ford Community College, Dearborn, Mich.	1	Coed	Public	9,876
Hibbing Junior College, Hibbing, Minn.	1	Coed	Public	837
High Point College, High Point, N.C.	2	Coed	Pvt-Methodist	1,562
Highland Park College, Highland Park, Mich.	1	Coed	Public	2,580
Hillsdale College, Hillsdale, Mich.	2	Coed	Public	1,213
Hinds Junior College, Raymond, Miss.	1	Coed	Public	1,832
Hiram College, Hiram, Ohio	2	Coed	Private	1,015
Hiwassee College, Madisonville, Tenn.	1	Coed	Pvt-Methodist	680
Hobart & William Smith Colleges, Geneva, N.Y.	3	Coord	Private	1,414
Hofstra University, Hempstead, L.I., N.Y.	3	Coed	Private	11,191
Hollins College, Hollins College, Va.	3	W	Private	855
Holmes Junior College, Goodman, Miss.	1	Coed	Public	652
Holy Cross, College of the, Worcester, Mass.	3	M	Pvt-Roman Catholic	2,094
Holy Family College, Philadelphia, Pa.	2	W	Pvt-Roman Catholic	577
Holy Family College, Manitowoc, Wis.	2	W	Pvt-Roman Catholic	537
Holy Names, College of the, Oakland, Calif.	3	W	Pvt-Roman Catholic	920
Hood College, Frederick, Md.	2	W	Private	742
Hope College, Holland, Mich.	2	Coed	Pvt-Reformed	1,727
Houghton College, Houghton, N.Y.	2	Coed	Pvt-Methodist	1,092
Houston, University of, Houston, Texas	4	Coed	Public	19,588
Howard County Junior College, Big Spring, Texas	1	Coed	Public	1,023
Howard Payne College, Brownwood, Texas	3	Coed	Pvt-Baptist	1,364
Howard University, Washington, D.C.	4	Coed	Public-Private	8,059
Hudson Valley Community College, Troy, N.Y.	1	Coed	Public	4,081
Humboldt State College, Arcata, Calif.	3	Coed	Public	3,356
Humphreys College, Stockton, Calif.	1	Coed	Private	435
Hunter College (of the City University of New York), New York, N.Y.	3	Coed	Public	26,136
Huntingdon College, Montgomery, Ala.	2	Coed	Pvt-Methodist	1,070
Huntington College, Huntington, Ind.	2	Coed	Pvt-Brethren	513
Huron College (of the University of Western Ontario), London, Ontario	2	Coed	Pvt-Anglican	538
Huron College, Huron, S.Dak.	2	Coed	Pvt-Presbyterian	759
Husson College, Bangor, Me.	2	Coed	Private	1,211
Huston-Tillotson College, Austin, Texas	2	Coed	Private	658
Hutchinson Community Junior College, Hutchinson, Kans.	1	Coed	Public	1,775
Idaho, College of, Caldwell, Idaho	2	Coed	Pvt-Presbyterian	999
Idaho, University of, Moscow, Idaho	4	Coed	Public	5,996
Idaho State University, Pocatello, Idaho	3	Coed	Public	5,290
Illinois, University of, Urbana & Chicago, Ill.	4	Coed	Public	41,809
Illinois College, Jacksonville, Ill.	2	Coed	Private	739
Illinois Institute of Technology, Chicago, Ill.	4	Coed	Private	8,133
Illinois State University, Normal, Ill.	3	Coed	Public	9,266
Illinois Teachers College, Chicago-North, Chicago, Ill.	3	Coed	Public	3,533
Illinois Teachers College, Chicago-South, Chicago, Ill.	3	Coed	Public	4,541
Illinois Valley Community College, La Salle, Ill.	1	Coed	Public	1,386
Illinois Wesleyan University, Bloomington, Ill.	3	Coed	Pvt-Methodist	1,468
Immaculata College, Immaculata, Pa.	2	W	Pvt-Roman Catholic	1,689

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Immaculate Conception Seminary, Conception, Mo.	3	M	Pvt-Roman Catholic	411
Immaculate Heart College, Los Angeles, Calif.	3	W	Pvt-Roman Catholic	1,304
Imperial Valley College, Imperial, Calif.	1	Coed	Public	755
Incarnate Word College, San Antonio, Texas	3	W	Pvt-Roman Catholic	1,326
Independence Community Junior College, Independence, Kans.	1	Coed	Public	577
Indian River Junior College, Fort Pierce, Fla.	1	Coed	Public	970
Indiana Central College, Indianapolis, Ind.	2	Coed	Pvt-Brethren	2,255
Indiana Institute of Technology, Fort Wayne, Ind.	2	Coed	Private	1,401
Indiana State University, Terre Haute, Ind.	3	Coed	Public	9,336
Indiana University of Pennsylvania, Indiana, Pa.	3	Coed	Public	6,331
Indiana University, Bloomington, Ind.	4	Coed	Public	41,583
Inter American University of Puerto Rico, San Germán, P.R.	2	Coed	Private	8,637
Iona College, New Rochelle, N.Y.	2	M	Pvt-Roman Catholic	2,967
Iowa, State College of, Cedar Falls, Iowa	3	Coed	Public	6,856
Iowa State University of Science & Technology, Ames, Iowa	4	Coed	Public	14,014
Iowa, University of, Iowa City, Iowa	4	Coed	Public	16,355
Iowa Wesleyan College, Mt. Pleasant, Iowa	2	Coed	Pvt-Methodist	981
Itawamba Junior College, Fulton, Miss.	1	Coed	Public	1,272
Ithaca College, Ithaca, N.Y.	2	Coed	Private	3,255
Jackson Community College, Jackson, Mich.	1	Coed	Public	2,710
Jackson State College, Jackson, Miss.	3	Coed	Public	2,224
Jacksonville State University, Jacksonville, Ala.	3	Coed	Public	4,055
Jacksonville University, Jacksonville, Fla.	3	Coed	Private	2,694
Jamestown College, Jamestown, N. Dak.	2	Coed	Pvt-Presbyterian	508
Jamestown Community College, Jamestown, N.Y.	1	Coed	Public	1,446
Jean-de-Brébeuf College (of the University of Montreal), Montreal, Quebec	2	M	Pvt-Roman Catholic	430
Jefferson Medical College of Philadelphia, Pa.	4	Coord	Public-Private	710
Jersey City State College, Jersey City, N.J.	3	Coed	Public	5,100
Jewish Theological Seminary of America, New York, N.Y.	4	Coed	Pvt-Jewish	687
John Brown University, Siloam Springs, Ark.	2	Coed	Private	650
John Carroll University, Cleveland, Ohio	3	M	Pvt-Roman Catholic	4,559
John Marshall Law School, Chicago, Ill.	3	Coed	Private	704
Johns Hopkins University, Baltimore, Md.	4	Coord	Private	9,948
Johnson C. Smith University, Charlotte, N.C.	2	Coed	Pvt-Presbyterian	1,055
Johnson State College, Johnson, Vt.	2	Coed	Public	472
Joliet Junior College, Joliet, Ill.	1	Coed	Public	3,631
Jones College, Jacksonville, Fla.	1	Coed	Private	901
Jones County Junior College, Ellisville, Miss.	1	Coed	Public	1,713
Judson College, Marion, Ala.	2	W	Pvt-Baptist	336
Juilliard School of Music, New York, N.Y.	3	Coed	Private	1,021
Juniata College, Huntington, Pa.	2	Coed	Pvt-Brethren	1,039
Kalamazoo College, Kalamazoo, Mich.	3	Coed	Pvt-Baptist	1,125
Kansas, University of, Lawrence, Kans.	4	Coed	Public	14,764
Kansas City Art Institute & School of Design, Kansas City, Mo.	2	Coed	Private	409
Kansas City College of Osteopathy & Surgery, Kansas City, Mo.	2	Coed	Private	403
Kansas City Kansas Community Junior College, Kansas City, Kans.	1	Coed	Public	1,432
Kansas State College of Pittsburg, Kans.	3	Coed	Public	5,593
Kansas State Teachers College, Emporia, Kans.	3	Coed	Public	7,162
Kansas State University of Agriculture & Applied Science, Manhattan, Kans.	4	Coed	Public	10,920
Kansas Wesleyan University, Salina, Kans.	2	Coed	Pvt-Methodist	680
Kaskaskia College, Centralia, Ill.	1	Coed	Public	746
Kearney State College, Kearney, Nebr.	3	Coed	Public	3,905
Keene State College (of the University of New Hampshire), Keene, N.H.	3	Coed	Public	1,828
Kellogg Community College, Battle Creek, Mich.	1	Coed	Public	2,521
Kendall College, Evanston, Ill.	1	Coed	Pvt-Methodist	730
Kent State University, Kent, Ohio	4	Coed	Public	21,326
Kentucky, University of, Lexington, Ky.	4	Coed	Public	18,484
Kentucky State College, Frankfort, Ky.	2	Coed	Public	1,425
Kentucky Wesleyan College, Owensboro, Ky.	2	Coed	Pvt-Methodist	1,148
Kenyon College, Gambier, Ohio	2	M	Private	776
Keuka College, Keuka Park, N.Y.	2	W	Pvt-Baptist	721
Keystone Junior College, La Plume, Pa.	1	Coed	Private	654
Kilgore College, Kilgore, Texas	1	Coed	Public	2,282
King College, Bristol, Tenn.	2	Coed	Pvt-Presbyterian	303
King's College, Charlotte, N.C.	1	Coed	Private	905
King's College, Wilkes-Barre, Pa.	2	M	Pvt-Roman Catholic	1,466
Kingsborough Community College (of the City University of New York), Brooklyn, N.Y.	1	Coed	Public	1,913
Kirksville College of Osteopathy & Surgery, Kirksville, Mo.	2	Coed	Private	374
Knox College, Galesburg, Ill.	2	Coed	Private	1,242
Knoxville College, Knoxville, Tenn.	2	Coed	Pvt-Presbyterian	907
Kutztown State College, Kutztown, Pa.	3	Coed	Public	3,210
Ladycliff College, Highland Falls, N.Y.	2	W	Pvt-Roman Catholic	527
Lafayette College, Easton, Pa.	2	M	Pvt-Presbyterian	1,848
La Grange College, La Grange, Ga.	2	Coed	Pvt-Methodist	552
Lake City Junior College and Forest Ranger School, Lake City, Fla.	1	Coed	Public	908
Lake Erie College, Painesville, Ohio	2	W	Private	1,075
Lake Forest College, Lake Forest, Ill.	2	Coed	Pvt-Presbyterian	1,282
Lake Michigan College, Benton Harbor, Mich.	1	Coed	Public	2,046
Lake-Sumter Junior College, Leesburg, Fla.	1	Coed	Public	921
Lakeland College, Sheboygan, Wis.	2	Coed	Pvt-Church of Christ	573
Lamar State College of Technology, Beaumont, Texas	3	Coed	Public	9,063
Lambuth College, Jackson, Tenn.	2	Coed	Pvt-Methodist	834
Lander College, Greenwood, S.C.	2	Coed	Private	602
Lane College, Jackson, Tenn.	2	Coed	Pvt-Methodist Episcopal	734
Laney College, Oakland, Calif.	1	Coed	Public	5,088
Langston University, Langston, Okla.	2	Coed	Public	1,255
Lansing Community College, Lansing, Mich.	1	Coed	Public	3,409
Laredo Junior College, Laredo, Texas	1	Coed	Public	902
La Salle College, Philadelphia, Pa.	2	M	Pvt-Roman Catholic	6,026
Lasell Junior College, Auburndale, Mass.	1	W	Private	721
La Sierra College, Riverside, Calif.	3	Coed	Pvt-Seventh-day Adventist	1,500
Lassen College, Susanville, Calif.	1	Coed	Public	687
Laval University, Quebec, Quebec	4	Coed	Pvt-Roman Catholic	17,006
La Verne College, La Verne, Calif.	3	Coed	Pvt-Brethren	695
Lawrence University, Appleton, Wis.	4	Coed	Private	1,376
Lebanon Valley College, Annville, Pa.	2	Coed	Pvt-Evangelical United Brethren	1,264
Lee College, Cleveland, Tenn.	2	Coed	Pvt-Church of God	987
Lee College, Baytown, Texas	1	Coed	Public	2,056
Lees-McRae College, Banner Elk, N.C.	1	Coed	Pvt-Presbyterian	611
Lehigh University, Bethlehem, Pa.	4	M	Private	4,540
Le Moyne College, Syracuse, N.Y.	2	Coed	Pvt-Roman Catholic	1,490
LeMoyne College, Memphis, Tenn.	2	Coed	Pvt-American Missionary Association	641
Lenoir-Rhyne College, Hickory, N.C.	2	Coed	Pvt-Lutheran	1,261
Lesley College, Cambridge, Mass.	3	Coed	Private	647
Lewis & Clark College, Portland, Oreg.	3	Coed	Pvt-Presbyterian	1,679
Lewis-Clark Normal School, Lewiston, Idaho	1	Coed	Public	666
Lewis College, Lockport, Ill.	2	Coed	Pvt-Roman Catholic	989
Limestone College, Gaffney, S.C.	2	W	Private	563
Lincoln Christian College, Lincoln, Ill.	3	Coed	Pvt-Christian	625
Lincoln College, Lincoln, Ill.	1	Coed	Pvt-Undenominational	578
Lincoln Memorial University, Harrogate, Tenn.	2	Coed	Private	573

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Lincoln University, Jefferson City, Mo	3	Coed	Public	1,882
Lincoln University, Lincoln University, Pa	2	Coed	Private	656
Lindenwood College for Women, St. Charles, Mo	2	W	Pvt-Presbyterian	803
Lindsey Wilson College, Columbia, Ky	1	Coed	Pvt-Methodist	572
Linfield College, McMinnville, Oreg	3	Coed	Pvt-Baptist	1,138
Little Rock University, Little Rock, Ark	2	Coed	Private	2,851
Livingston State College, Livingston, Ala	3	Coed	Public	1,163
Livingstone College, Salisbury, N.C	2	Coed	Pvt-Methodist Episcopal	777
Lock Haven State College, Lock Haven, Pa	2	Coed	Public	1,659
Loma Linda University, Loma Linda, Calif	4	Coed	Pvt-Seventh-day Adventist	1,109
Long Beach City College, Long Beach, Calif	1	Coed	Public	15,132
Long Island University, Greenvale, N.Y. (incl. Bklyn. College of Pharmacy; C.W. Post & Southampton campuses, Long Island, N.Y.)	3	Coed	Private	16,196
Lon Morris College, Jacksonville, Texas	1	Coed	Pvt-Methodist	428
Longwood College, Farmville, Va	3	W	Public	1,461
Loras College, Dubuque, Iowa	2	M	Pvt-Roman Catholic	1,629
Loretto Heights College, Loretto, Colo	2	W	Pvt-Roman Catholic	937
Los Angeles City College, Los Angeles, Calif	1	Coed	Public	16,573
Los Angeles Harbor College, Wilmington, Calif	1	Coed	Public	5,763
Los Angeles Pierce College, Woodland Hills, Calif	1	Coed	Public	13,811
Los Angeles Trade-Technical College, Los Angeles, Calif	1	Coed	Public	15,322
Los Angeles Valley College, Van Nuys, Calif	1	Coed	Public	15,000
Louisburg College, Louisburg, N.C	1	Coed	Pvt-Methodist	676
Louisiana College, Pineville, La	2	Coed	Pvt-Baptist	1,014
Louisiana Polytechnic Institute, Ruston, La	3	Coed	Public	6,534
Louisiana State University & Agricultural & Mechanical College, Baton Rouge, La	4	Coed	Public	24,286
Louisville, University of, Louisville, Ky	4	Coed	Public	7,973
Lowell Technological Institute, Lowell, Mass	4	Coed	Public	4,377
Lower Columbia College, Longview, Wash	1	Coed	Public	1,208
Loyola College, Baltimore, Md	3	Coord	Pvt-Roman Catholic	2,839
Loyola College (of the University of Montreal), Montreal, Quebec	2	Coed	Pvt-Roman Catholic	2,256
Loyola University, Chicago, Ill	4	Coed	Pvt-Roman Catholic	11,908
Loyola University, New Orleans, La	3	Coord	Pvt-Roman Catholic	3,306
Loyola University of Los Angeles, Los Angeles, Calif	3	M	Pvt-Roman Catholic	3,073
Lubbock Christian College, Lubbock, Texas	1	Coed	Pvt-Church of Christ	843
Luther College, Decorah, Iowa	2	Coed	Pvt-Lutheran	1,718
Luther Theological Seminary, St. Paul, Minn	3	M	Pvt-Lutheran	489
Lutheran School of Theology, Maywood, Ill	4	M	Pvt-Lutheran	281
Lycoming College, Williamsport, Pa	2	Coed	Pvt-Methodist	1,744
Lynchburg College, Lynchburg, Va	2	Coed	Pvt-Disciples of Christ	1,264
Lyndon State College, Lyndon Center, Vt	2	Coed	Public	386
Lyons Township Junior College, La Grange, Ill	1	Coed	Public	1,462
Macalester College, St. Paul, Minn	3	Coed	Private	1,863
McGill University, Montreal, Quebec	4	Coed	Private	11,676
McMaster University, Hamilton, Ontario	4	Coed	Private	3,772
MacMurray College, Jacksonville, Ill	2	Coord	Pvt-Methodist	1,121
McMurry College, Abilene, Texas	3	Coed	Pvt-Methodist	1,692
McNeese State College, Lake Charles, La	2	Coed	Public	3,784
McPherson College, McPherson, Kans	2	Coed	Pvt-Brethren	757
Madison College, Harrisonburg, Va	3	Coord	Public	2,348
Madonna College, Livonia, Mich	2	W	Pvt-Roman Catholic	490
Maine, University of, Orono, Me	4	Coed	Public	11,755
Malone College, Canton, Ohio	2	Coed	Pvt-Friends	1,115
Manatee Junior College, Bradenton, Fla	1	Coed	Public	2,052
Manchester College, North Manchester, Ind	2	Coed	Pvt-Brethren	1,339
Manhattan, Borough of, Community College (of the City University of New York), N.Y	1	Coed	Public	1,695
Manhattan College, New York, N.Y	3	M	Pvt-Roman Catholic	4,838
Manhattan School of Music, New York, N.Y	3	Coed	Private	654
Manhattanville College of the Sacred Heart, Purchase, N.Y	3	W	Pvt-Roman Catholic	1,155
Manitoba, University of, Winnipeg, Man. (incl. Brandon, St. John's, St. Paul's & United colleges, qq.v.)	4	Coed	Public	10,786
Mankato State College, Mankato, Minn	3	Coed	Public	10,113
Mansfield State College, Mansfield, Pa	2	Coed	Public	1,935
Marian College, Indianapolis, Ind	2	Coed	Pvt-Roman Catholic	1,066
Marian College of Fond du Lac, Fond du Lac, Wis	2	W	Pvt-Roman Catholic	405
Marianopolis College (of the University of Montreal), Montreal, Quebec	2	W	Pvt-Roman Catholic	884
Marietta College, Marietta, Ohio	2	Coed	Private	2,048
Marillac College, Normandy, Mo	2	W	Pvt-Roman Catholic	419
Marin, College of, Kentfield, Calif	1	Coed	Public	4,358
Marion College, Marion, Ind	2	Coed	Pvt-Methodist	574
Marion Institute, Marion, Ala	1	M	Private	408
Marist College, Poughkeepsie, N.Y	2	M	Pvt-Roman Catholic	1,631
Marquette University, Milwaukee, Wis	4	Coed	Pvt-Roman Catholic	11,320
Mars Hill College, Mars Hill, N.C	2	Coed	Pvt-Baptist	1,384
Marshall University, Huntington, W.Va	3	Coed	Public	7,033
Marshalltown Community College, Marshalltown, Iowa	1	Coed	Public	867
Martin College, Pulaski, Tenn	1	Coed	Pvt-Methodist	481
Mary Baldwin College, Staunton, Va	2	W	Pvt-Presbyterian	698
Mary Hardin-Baylor College, Belton, Texas	2	Coed	Pvt-Baptist	1,024
Mary Manse College, Toledo, Ohio	2	W	Pvt-Roman Catholic	1,503
Mary Washington College of the University of Virginia, Fredericksburg, Va	2	W	Public	...[3]
Marycrest College, Davenport, Iowa	2	W	Pvt-Roman Catholic	1,009
Marygrove College, Detroit, Mich	2	W	Pvt-Roman Catholic	1,498
Maryknoll Seminary, Glen Ellyn, Ill	2	M	Pvt-Roman Catholic	397
Maryland, University of, College Park & Baltimore, Md. (incl. Maryland State College, Princess Anne, q.v.)	4	Coed	Public	38,769
Maryland State College of the University of Maryland, Princess Anne, Md	2	Coed	Private	...[4]
Marylhurst College, Marylhurst, Oreg	2	W	Pvt-Roman Catholic	717
Marymount College, Palos Verdes Estates, Calif	2	W	Pvt-Roman Catholic	369
Marymount College, Salina, Kans	2	W	Pvt-Roman Catholic	527
Marymount College, Tarrytown, N.Y	2	W	Pvt-Roman Catholic	960
Marymount College, Arlington, Va	1	W	Pvt-Roman Catholic	497
Marymount Manhattan College, New York, N.Y	2	W	Pvt-Roman Catholic	565
Maryville College, Maryville, Tenn	2	Coed	Pvt-Presbyterian	812
Maryville College of the Sacred Heart, St. Louis, Mo	2	W	Pvt-Roman Catholic	484
Marywood College, Scranton, Pa	3	W	Pvt-Roman Catholic	1,679
Massachusetts, University of, Amherst, Mass	4	Coed	Public	10,832
Massachusetts College of Art, Boston, Mass	2	Coed	Public	499
Massachusetts College of Pharmacy, Boston, Mass	4	Coed	Private	664
Massachusetts Institute of Technology, Cambridge, Mass.	4	Coed	Private	7,408
Massachusetts State College at Boston, Mass	3	Coed	Public	5,533
Massachusetts State College at Bridgewater, Mass	3	Coed	Public	4,388
Massachusetts State College at Fitchburg, Mass	3	Coed	Public	2,164
Massachusetts State College at Framingham, Mass	2	W	Public	1,896
Massachusetts State College at Lowell, Mass	2	Coed	Public	1,083
Massachusetts State College at North Adams, Mass	3	Coed	Public	1,017
Massachusetts State College at Salem, Mass	3	Coed	Public	4,507
Massachusetts State College at Westfield, Mass	3	Coed	Public	2,107
Massachusetts State College at Worcester, Mass	3	Coed	Public	2,214
Mayville State College, Mayville, N.Dak	2	Coed	Public	850
Meharry Medical College, Nashville, Tenn	2	Coed	Private	341
Memorial University of Newfoundland, St. John's, Nfld	3	Coed	Public	3,168
Memphis Academy of Arts, Memphis, Tenn	2	Coed	Private	415
Memphis State University, Memphis, Tenn	3	Coed	Public	13,546
Menlo College, Menlo Park, Calif	2	M	Private	519
Merced College, Merced, Calif	1	Coed	Public	3,000
Mercer University, Macon, Ga	3	Coed	Pvt-Baptist	1,845
Mercy College of Detroit, Detroit, Mich	2	Coed	Pvt-Roman Catholic	1,017
Mercyhurst College, Erie, Pa	2	W	Pvt-Roman Catholic	645
Meredith College, Raleigh, N.C	2	W	Pvt-Baptist	845
Meridian Junior College, Meridian, Miss	1	Coed	Public	938

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Merrimack College, North Andover, Mass	2	Coed	Pvt-Roman Catholic	2,207
Merrit College, Oakland, Calif	1	Coed	Public	7,767
Mesa County Junior College, Grand Junction, Colo	1	Coed	Public	2,367
Mesabi State Junior College, Virginia, Minn	1	Coed	Public	686
Messiah College, Grantham, Pa	2	Coed	Pvt-Brethren	369
Metropolitan Junior College, Kansas City, Mo	1	Coed	Public	5,893
Miami, University of, Coral Gables, Fla	4	Coed	Private	14,001
Miami University, Oxford, Ohio	3	Coed	Public	16,817
Miami-Dade Junior College, Miami, Fla	1	Coed	Public	14,513
Michigan, University of, Ann Arbor, Mich	4	Coed	Public	34,453
Michigan State University, East Lansing, Mich	4	Coed	Public	41,782
Michigan Technological University, Houghton, Mich	3	Coed	Public	4,757
Middle Georgia College, Cochran, Ga	1	Coed	Public	1,385
Middle Tennessee State University, Murfreesboro, Tenn	3	Coed	Public	5,509
Middlebury College, Middlebury, Vt	4	Coed	Private	1,414
Midland Lutheran College, Fremont, Nebr	2	Coed	Pvt-Lutheran	986
Midwestern University, Wichita Falls, Texas	3	Coed	Public	3,369
Millersville State College, Millersville, Pa	3	Coed	Public	3,315
Milligan College, Milligan College, Tenn	2	Coed	Private	819
Millikin University, Decatur, Ill	3	Coed	Pvt-Presbyterian	1,847
Mills College, Oakland, Calif	3	W	Private	760
Mills College of Education, New York, N.Y	2	W	Private	420
Millsaps College, Jackson, Miss	2	Coed	Pvt-Methodist	873
Milwaukee Institute of Technology, Milwaukee, Wis	1	Coed	Public	8,346
Milwaukee School of Engineering, Milwaukee, Wis	2	M	Private	1,995
Minneapolis School of Art, Minneapolis, Minn	2	Coed	Private	339
Minnesota, University of, Minneapolis, Minn	4	Coed	Public	58,274
Minot State College, Minot, N.Dak	2	Coed	Public	2,709
Mira Costa College, Oceanside, Calif	1	Coed	Public	1,570
Misericordia, College, Dallas, Pa	2	W	Pvt-Roman Catholic	1,301
Mississippi, University of, University, Miss	4	Coed	Public	6,656
Mississippi College, Clinton, Miss	3	Coed	Pvt-Baptist	1,960
Mississippi Delta Junior College, Moorhead, Miss	1	Coed	Public	729
Mississippi State College for Women, Columbus, Miss	2	W	Public	2,478
Mississippi State University, State College, Miss	4	Coed	Public	7,935
Missouri, University of, Columbia, Mo	4	Coed	Public	34,029
Missouri Southern College, Joplin, Mo	1	Coed	Public	599
Missouri Valley College, Marshall, Mo	2	Coed	Pvt-Presbyterian	827
Missouri Western Junior College, St. Joseph, Mo	1	Coed	Public	1,085
Mitchell College, New London, Conn	1	Coed	Private	1,550
Mitchell College, Statesville, N.C	1	Coed	Private	602
Modesto Junior College, Modesto, Calif	1	Coed	Public	3,689
Mohawk Valley Community College, Utica, N.Y	1	Coed	Public	3,482
Moncton University, Moncton, New Brunswick	3	Coed	Pvt-Roman Catholic	1,445
Monmouth College, Monmouth, Ill	2	Coed	Pvt-Presbyterian	1,145
Monmouth College, West Long Branch, N.J	2	Coed	Private	4,247
Monroe Community College, Rochester, N.Y	1	Coed	Public	3,512
Montana, University of, Missoula, Mont	4	Coed	Public	6,192
Montana School of Mineral Science and Technology, Butte, Mont	3	Coed	Public	603
Montana State University, Bozeman, Mont	4	Coed	Public	5,933
Montclair State College, Upper Montclair, N.J	3	Coed	Public	5,594
Monterey Peninsula College, Monterey, Calif	1	Coed	Public	3,823
Montgomery Junior College, Takoma Park, Md	1	Coed	Public	4,135
Monticello College, Godfrey, Ill	1	W	Private	369
Montreal, University of, Montreal, Quebec (incl. Jean-de-Brébeuf, Loyola, Marianopolis & St. Mary colleges, qq.v.)	4	Coed	Pvt-Roman Catholic	29,323
Montreat-Anderson College, Montreat, N.C	1	Coed	Pvt-Presbyterian	401
Moody Bible Institute, The, Chicago, Ill	1	Coed	Private	1,665
Moore College of Art, Philadelphia, Pa	2	W	Private	449
Moorhead State College, Moorhead, Minn	3	Coed	Public	3,635
Moravian College, Bethlehem, Pa	2	Coed	Pvt-Moravian	1,613
Morehead State University, Morehead, Ky	3	Coed	Public	4,797
Morehouse College, Atlanta, Ga	2	M	Private	1,001
Morgan State College, Baltimore, Md	3	Coed	Public	3,264
Morningside College, Sioux City, Iowa	2	Coed	Pvt-Methodist	1,769
Morris Brown College, Atlanta, Ga	2	Coed	Pvt-Methodist Episcopal	1,001
Morris Harvey College, Charleston, W.Va	2	Coed	Private	3,033
Morton Junior College, Cicero, Ill	1	Coed	Public	2,327
Mount Allison University, Sackville, New Brunswick	3	Coed	Pvt-United Church	1,209
Mount Aloysius Junior College, Cresson, Pa	1	W	Pvt-Roman Catholic	418
Mount Angel College, Mount Angel, Oreg	2	Coed	Pvt-Roman Catholic	420
Mount Holyoke College, South Hadley, Mass	3	W	Private	1,748
Mount Ida Junior College, Newton Centre, Mass	1	W	Private	626
Mount Marty College, Yankton, S.Dak	2	W	Pvt-Roman Catholic	474
Mount Mary College, Milwaukee, Wis	2	W	Pvt-Roman Catholic	1,196
Mount Mercy College, Cedar Rapids, Iowa	2	W	Pvt-Roman Catholic	553
Mount Mercy College, Pittsburgh, Pa	2	W	Pvt-Roman Catholic	1,524
Mount Olive Junior College, Mount Olive, N.C	1	Coed	Pvt-Baptist	330
Mount St. Agnes College, Baltimore, Md	2	W	Pvt-Roman Catholic	520
Mount St. Clare College, Clinton, Iowa	1	W	Pvt-Roman Catholic	394
Mount St. Joseph-on-the-Ohio, College of, Mt. St. Joseph, Ohio	2	W	Pvt-Roman Catholic	1,145
Mount St. Joseph College, Buffalo, N.Y	3	W	Pvt-Roman Catholic	472
Mount St. Mary's College, Los Angeles, Calif	3	Coord	Pvt-Roman Catholic	1,610
Mount St. Mary's College, Emmitsburgh, Md	2	M	Pvt-Roman Catholic	822
Mount St. Scholastica College, Atchison, Kans	2	W	Pvt-Roman Catholic	621
Mount St. Vincent, College of, New York, N.Y	2	W	Pvt-Roman Catholic	878
Mount St. Vincent College, Halifax, Nova Scotia	3	W	Pvt-Roman Catholic	570
Mount San Antonio College, Walnut, Calif	1	Coed	Public	11,601
Mount Union College, Alliance, Ohio	2	Coed	Pvt-Methodist	1,312
Muhlenberg College, Allentown, Pa	2	Coed	Pvt-Lutheran	1,818
Multnomah College, Portland, Oreg	1	Coed	Private	2,135
Multnomah School of the Bible, Portland, Oreg	2	Coed	Pvt-Interdenominational	478
Mundelein College, Chicago, Ill	2	W	Pvt-Roman Catholic	1,418
Murray State Agricultural College, Tishomingo, Okla	1	Coed	Public	600
Murray State University, Murray, Ky	3	Coed	Public	6,135
Muskegon Community College, Muskegon, Mich	1	Coed	Public	3,192
Muskingum College, New Concord, Ohio	2	Coed	Pvt-Presbyterian	1,524
Napa College, Napa, Calif	1	Coed	Public	2,660
Nassau Community College, Garden City, N.Y	1	Coed	Public	7,012
Nasson College, Springvale, Me	2	Coed	Private	615
National College of Education, Evanston, Ill	3	Coed	Private	1,073
Navarro Junior College, Corsicana, Texas	1	Coed	Public	1,184
Nazareth College, Kalamazoo, Mich	2	W	Pvt-Roman Catholic	488
Nazareth College of Kentucky, Nazareth, Ky	2	W	Pvt-Roman Catholic	509
Nazareth College of Rochester, N.Y	3	W	Pvt-Roman Catholic	1,308
Nebraska, University of, Lincoln, Nebr	4	Coed	Public	16,634
Nebraska Wesleyan University, Lincoln, Nebr	2	Coed	Pvt-Methodist	1,480
Nevada, University of, Reno, Nev	4	Coed	Public	8,039
New Brunswick, University of, Fredericton, New Brunswick	4	Coed	Public	3,338
New England Conservatory of Music, Boston, Mass	3	Coed	Private	372
New Hampshire, University of, Durham, N.H	4	Coed	Public	6,957
New Haven College, West Haven, Conn	2	Coed	Private	2,673
New Jersey College of Medicine & Dentistry, Jersey City, N.J	4	Coed	Public	489
New Mexico, University of, Albuquerque, N.Mex	4	Coed	Public	12,357
New Mexico Highlands University, Las Vegas, N.Mex	3	Coed	Public	1,672
New Mexico Institute of Mining & Technology, Socorro, N.Mex	4	Coed	Public	480
New Mexico Military Institute, Roswell, N.Mex	1	M	Public	400
New Mexico State University, University Park, N.Mex	4	Coed	Public	7,126
New Orleans Baptist Theological Seminary, New Orleans, La	4	Coed	Pvt-Baptist	681
New Rochelle, College of, New Rochelle, N.Y	2	W	Pvt-Roman Catholic	895
New School for Social Research, New York, N.Y	4	Coed	Private	2,187

Name and Location	Level of Instruction	Student Body	Control	Enrollment
New York, State University of, Albany, N.Y.:				92,831
Agricultural & Technical College at Alfred	1	Coed	Public	2,151
Agricultural & Technical College at Canton	1	Coed	Public	1,024
Agricultural & Technical College at Cobleskill	1	Coed	Public	1,218
Agricultural & Technical College at Delhi	1	Coed	Public	1,143
Agricultural & Technical College at Farmingdale	1	Coed	Public	7,809
Agricultural & Technical College at Morrisville	1	Coed	Public	1,381
College of Agriculture at Cornell University, Ithaca	4	Coed	Public	1,939
College of Ceramics at Alfred University, Alfred	4	Coed	Public	508
College of Forestry at Syracuse University, Syracuse	4	Coed	Public	1,122
College of Home Economics at Cornell University, Ithaca	4	Coed	Public	734
Downstate Medical Center, Brooklyn	4	Coed	Public	831
Graduate School of Public Affairs, Albany	4	Coed	Public	348
Maritime College at Fort Schuyler	2	M	Public	660
School of Industrial & Labor Relations at Cornell University, Ithaca	4	Coed	Public	395
State University College at Brockport	3	Coed	Public	3,353
State University College at Buffalo	3	Coed	Public	6,610
State University College at Cortland	3	Coed	Public	3,867
State University College at Fredonia	3	Coed	Public	2,723
State University College at Geneseo	3	Coed	Public	3,035
State University College at New Paltz	3	Coed	Public	4,115
State University College at Oneonta	3	Coed	Public	3,872
State University College at Oswego	3	Coed	Public	4,788
State University College at Plattsburgh	3	Coed	Public	3,122
State University College at Potsdam	3	Coed	Public	2,537
State University at Albany	4	Coed	Public	6,147
State University at Binghamton	3	Coed	Public	2,551
State University at Buffalo	4	Coed	Public	20,276
State University at Stony Brook	4	Coed	Public	2,837
Upstate Medical Center, Syracuse	4	Coed	Public	563
Veterinary College at Cornell University, Ithaca	4	Coed	Public	259
New York City Community College of Applied Arts & Sciences, Brooklyn, N.Y	1	Coed	Public	9,347
New York Law School, New York, N.Y	4	Coed	Private	518
New York Medical College, New York, N.Y	4	Coed	Private	575
New York University, New York, N.Y	4	Coed	Private	31,825
Newark College of Engineering, Newark, N.J	4	Coed	Public	6,091
Newark State College, Union, N.J	3	Coed	Public	7,750
Newberry College, Newberry, S.C	2	Coed	Pvt-Lutheran	823
Newton College of the Sacred Heart, Newton, Mass	2	W	Pvt-Roman Catholic	730
Newton Junior College, Newtonville, Mass	1	Coed	Public	639
Niagara University, Niagara University, N.Y	3	Coed	Pvt-Roman Catholic	2,159
Norman College, Norman Park, Ga	1	Coed	Pvt-Baptist	466
North Carolina, Agricultural & Technical College of, Greensboro, N.C	3	Coed	Public	3,435
North Carolina, University of, at Chapel Hill, N.C	4	Coed	Public	13,130
North Carolina, University of, at Charlotte, N.C	2	Coed	Public	1,815
North Carolina, University of, at Greensboro, N.C	4	Coed	Public	4,866
North Carolina College at Durham, N.C	4	Coed	Public	2,780
North Carolina State University at Raleigh, N.C	4	Coed	Public	10,071
North Carolina Wesleyan College, Rocky Mount, N.C	2	Coed	Pvt-Methodist	651
North Central Bible College, Minneapolis, Minn	2	Coed	Pvt-Assemblies of God	412
North Central College, Naperville, Ill	2	Coed	Pvt-Brethren	1,125
North Dakota, University of, Grand Forks, N.Dak	4	Coed	Public	6,640
North Dakota State University, Fargo, N.Dak	4	Coed	Public	5,006
North Florida Junior College, Madison, Fla	1	Coed	Public	918
North Georgia College, Dahlonega, Ga	2	Coed	Public	967
North Greenville Junior College, Tigerville, S.C	1	Coed	Pvt-Baptist	530
North Idaho Junior College, Coeur d'Alene, Idaho	1	Coed	Public	834
North Iowa Area Community College, Mason City, Ia	1	Coed	Public	1,535
North Park College & Theological Seminary, Chicago, Ill	2	Coed	Pvt-Evangelical Covenant	1,730
North Texas State University, Denton, Texas	4	Coed	Public	14,773
Northeast Louisiana State College, Monroe, La	3	Coed	Public	5,140
Northeast Mississippi Junior College, Booneville, Miss	1	Coed	Public	814
Northeast Missouri State Teachers College, Kirksville, Mo	3	Coed	Public	5,875
Northeastern Junior College, Sterling, Colo	1	Coed	Public	1,541
Northeastern Oklahoma Agricultural & Mechanical College, Miami, Okla	1	Coed	Public	1,816
Northeastern State College, Tahlequah, Okla	3	Coed	Public	4,840
Northeastern University, Boston, Mass	4	Coed	Private	29,131
Northern Arizona University, Flagstaff, Ariz	3	Coed	Public	5,779
Northern Illinois University, De Kalb, Ill	4	Coed	Public	15,661
Northern Michigan University, Marquette, Mich	3	Coed	Public	5,560
Northern Montana College, Havre, Mont	2	Coed	Public	1,412
Northern Oklahoma College, Tonkawa, Okla	1	Coed	Public	978
Northern State College, Aberdeen, S.Dak	3	Coed	Public	2,636
Northland College, Ashland, Wis	2	Coed	Private	677
Northrop Institute of Technology, Inglewood, Calif	2	Coed	Private	1,789
Northwest Christian College, Eugene, Oreg	2	Coed	Pvt-Disciples of Christ	443
Northwest College, Kirkland, Wash	2	Coed	Pvt-Assemblies of God	402
Northwest Community College, Powell, Wyo	1	Coed	Public	558
Northwest Mississippi Junior College, Senatobia, Miss	1	Coed	Public	1,098
Northwest Missouri State College, Maryville, Mo	2	Coed	Public	3,869
Northwest Nazarene College, Nampa, Idaho	2	Coed	Pvt-Nazarene	1,050
Northwestern College, Orange City, Iowa	2	Coed	Pvt-Reformed	568
Northwestern Michigan College, Traverse City, Mich	1	Coed	Public	1,204
Northwestern State College, Alva, Okla	3	Coed	Public	2,040
Northwestern State College of Louisiana, Natchitoches, La	3	Coed	Public	4,845
Northwestern University, Evanston, Ill	4	Coed	Private	16,472
Norwich University, Northfield, Vt	2	M	Private	1,221
Notre Dame, College of, Belmont, Calif	2	W	Pvt-Roman Catholic	543
Notre Dame, University of, Notre Dame, Ind	4	M	Pvt-Roman Catholic	7,155
Notre Dame College, St. Louis, Mo	2	W	Pvt-Roman Catholic	424
Notre Dame College, Cleveland, Ohio	2	W	Pvt-Roman Catholic	586
Notre Dame College of Staten Island, N.Y	2	W	Pvt-Roman Catholic	478
Notre Dame of Maryland, College of, Baltimore, Md	2	W	Pvt-Roman Catholic	1,084
Nova Scotia Technical College, Halifax, Nova Scotia	4	Coed	Public	398
Nyack Missionary College, Nyack, N.Y	2	Coed	Pvt-Christian & Missionary Alliance	577
Oakwood College, Huntsville, Ala	2	Coed	Pvt-Seventh-day Adventist	488
Oberlin College, Oberlin, Ohio	3	Coed	Private	2,465
Occidental College, Los Angeles, Calif	4	Coed	Private	1,603
Odessa College, Odessa, Texas	1	Coed	Public	2,630
Oglethorpe College, Atlanta, Ga	2	Coed	Private	691
Ohio Northern University, Ada, Ohio	2	Coed	Pvt-Methodist	2,927
Ohio State University, The, Columbus, Ohio	4	Coed	Public	40,474
Ohio University, Athens, Ohio	4	Coed	Public	19,078
Ohio Wesleyan University, Delaware, Ohio	3	Coed	Pvt-Methodist	2,457
Oklahoma, University of, Norman, Okla	4	Coed	Public	17,946
Oklahoma Baptist University, Shawnee, Okla	2	Coed	Pvt-Baptist	1,536
Oklahoma Christian College, Oklahoma City, Okla	2	Coed	Private	774
Oklahoma City University, Oklahoma City, Okla	2	Coed	Pvt-Methodist	2,722
Oklahoma College for Women, Chickasha, Okla	2	W	Public	885
Oklahoma Military Academy, Claremore, Okla	1	M	Public	289
Oklahoma State University of Agriculture & Applied Science, Stillwater, Okla	4	Coed	Public	18,751
Old Dominion College, Norfolk, Va	2	Coed	Public	7,417
Olivet College, Olivet, Mich	2	Coed	Private	682
Olivet Nazarene College, Kankakee, Ill	2	Coed	Pvt-Nazarene	1,580
Olympic College, Bremerton, Wash	1	Coed	Public	4,247
Omaha, Municipal University of, Omaha, Nebr	3	Coed	Public	9,082
Orange Coast College, Costa Mesa, Calif	1	Coed	Public	15,238
Orange County Community College, Middletown, N.Y	1	Coed	Public	3,719

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Oregon, University of, Eugene, Oreg	4	Coed	Public	13,399
Oregon College of Education, Monmouth, Oreg	3	Coed	Public	2,073
Oregon State University, Corvallis, Oreg	4	Coed	Public	11,884
Oregon Technical Institute, Klamath Falls, Oreg	1	Coed	Public	1,168
Orlando Junior College, Orlando, Fla	1	Coed	Private	2,422
Osgoode Hall Law School, Toronto, Ontario	4	Coed	Private	525
Ottawa, University of, Ottawa, Ontario	4	Coed	Private	5,211
Ottawa University, Ottawa, Kans	2	Coed	Pvt-Baptist	961
Otterbein College, Westerville, Ohio	2	Coed	Pvt-Brethren	1,537
Ottumwa Heights College, Ottumwa, Iowa	1	W	Pvt-Roman Catholic	350
Ouachita Baptist University, Arkadelphia, Ark	3	Coed	Pvt-Baptist	1,785
Our Lady of Cincinnati College, Cincinnati, Ohio	2	W	Pvt-Roman Catholic	1,221
Our Lady of the Elms, College of, Chicopee, Mass	2	W	Pvt-Roman Catholic	925
Our Lady of the Lake College, San Antonio, Texas	3	W	Pvt-Roman Catholic	1,351
Owen College, Memphis, Tenn	1	Coed	Pvt-Baptist	372
Ozarks, College of the, Clarksville, Ark	2	Coed	Pvt-Presbyterian	470
Ozarks, The School of the, Point Lookout, Mo	1	Coed	Pvt-Presbyterian	528
Pace College, New York, N.Y	3	Coed	Private	8,006
Pacific, University of the, Stockton, Calif	4	Coed	Pvt-Methodist	3,154
Pacific Lutheran University, Tacoma, Wash	3	Coed	Pvt-Lutheran	2,319
Pacific Union College, Angwin, Calif	3	Coed	Pvt-Seventh-day Adventist	1,460
Pacific University, Forest Grove, Oreg	3	Coed	Public	1,011
Paducah Junior College, Paducah, Ky	1	Coed	Public	1,159
Paine College, Augusta, Ga	2	Coed	Pvt-Methodist Episcopal & Methodist	479
Palm Beach Junior College, Lake Worth, Fla	1	Coed	Public	4,514
Palmer College, Charleston, S.C	1	Coed	Private	1,028
Palo Verde College, Blythe, Calif	1	Coed	Public	342
Palomar College, San Marcos, Calif	1	Coed	Public	3,630
Pan American College, Edinburg, Texas	2	Coed	Public	2,861
Panhandle Agricultural & Mechanical College, Goodwell, Okla	2	Coed	Public	1,073
Panola County Junior College, Carthage, Texas	1	Coed	Public	447
Paris Junior College, Paris, Texas	1	Coed	Public	616
Park College, Parkville, Mo	2	Coed	Pvt-Presbyterian	628
Parsons College, Fairfield, Iowa	2	Coed	Pvt-Presbyterian	4,303
Pasadena City College, Pasadena, Calif	1	Coed	Public	13,539
Pasadena College, Pasadena, Calif	3	Coed	Pvt-Nazarene	1,400
Paterson State College, Wayne, N.J	3	Coed	Public	4,598
Peabody Institute of the City of Baltimore, Md	4	Coed	Private	466
Peace College, Raleigh, N.C	1	W	Pvt-Presbyterian	367
Pearl River Junior College, Poplarville, Miss	1	Coed	Public	846
Peirce Junior College, Philadelphia, Pa	1	Coed	Private	2,390
Pembroke State College, Pembroke, N.C	2	Coed	Public	1,350
Peninsula College, Port Angeles, Wash	1	Coed	Public	8,000
Pennsylvania, University of, Philadelphia, Pa	4	Coed	Private	19,282
Pennsylvania Military College, Chester, Pa	2	M	Private	2,382
Pennsylvania State University, University Park, Allentown, Altoona, Berks, Dubois, Erie, Hazelton, McKeesport, Monaca, Mont Alto, New Kensington, Philadelphia, Schuylkill, Scranton, Sharon, Uniontown, Wilkes-Barre, and York, Pa	4	Coed	Private-Public	35,801
Pensacola Junior College, Pensacola, Fla	1	Coed	Public	3,969
Pepperdine College, Los Angeles, Calif	3	Coed	Private	2,354
Perkinston College, Perkinston, Miss	1	Coed	Public	1,617
Peru State College, Peru, Nebr	2	Coed	Public	1,129
Pfeiffer College, Misenheimer, N.C	2	Coed	Pvt-Methodist	917
Philadelphia College of Bible, Philadelphia, Pa	2	Coed	Private	523
Philadelphia College of Osteopathy, Philadelphia, Pa	3	Coed	Private	354
Philadelphia College of Pharmacy & Science, Philadelphia, Pa	4.	Coed	Private	837
Philadelphia College of Textiles & Science, Philadelphia, Pa	2	Coord	Private	1,506
Philadelphia College of Art, Philadelphia, Pa	2	Coed	Private	1,472
Philander Smith College, Little Rock, Ark	2	Coed	Pvt-Methodist	628
Phillips University, Enid, Okla	3	Coed	Pvt-Disciples of Christ	1,395
Phoenix College, Phoenix, Ariz	1	Coed	Public	15,041
Piedmont College, Demorest, Ga	2	Coed	Private	328
Pikeville College, Pikeville, Ky	2	Coed	Pvt-Presbyterian	800
Pine Manor Junior College, Chestnut Hill, Mass	1	W	Private	348
Pittsburgh, University of, Pittsburgh, Bradford, Greensburg, Johnstown, and Titusville, Pa	4	Coed	Private	17,796
Pitzer College, Claremont, Calif	2	W	Private	348
Plymouth State College (of the University of New Hampshire), Plymouth, N.H	3	Coed	Public	1,546
Point Park Junior College, Pittsburgh, Pa	1	Coed	Private	2,417
Pomona College, Claremont, Calif	2	Coed	Private	1,173
Port Huron Junior College, Port Huron, Mich	1	Coed	Public	2,628
Porterville College, Porterville, Calif	1	Coed	Public	606
Portland, University of, Portland, Oreg	4	Coed	Pvt-Roman Catholic	1,859
Portland State College, Portland, Oreg	3	Coed	Public	9,089
Post Junior College, Waterbury, Conn	1	Coed	Private	350
Potomac State College of West Virginia University, Keyser, W.Va	1	Coed	Public	783
Prairie View Agricultural & Mechanical College, Prairie View, Texas	3	Coed	Public	3,295
Pratt Institute, Brooklyn, N.Y	3	Coed	Private	4,238
Presbyterian College, Clinton, S.C	2	Coed	Pvt-Presbyterian	676
Princeton Theological Seminary, Princeton, N.J	4	Coed	Pvt-Presbyterian	518
Princeton University, Princeton, N.J	4	M	Private	4,404
Principia College, Elsah, Ill	2	Coed	Private	649
Providence College, Providence, R.I	4	M	Pvt-Roman Catholic	4,257
Puerto Rico, University of, Río Piedras, P.R	3	Coed	Private	26,606
Puerto Rico Junior College, Río Piedras, P.R	1	Coed	Private	1,786
Puget Sound, University of, Tacoma, Wash	3	Coed	Pvt-Methodist	2,917
Purdue University, Lafayette, Ind	4	Coed	Public	27,793
Queens College (of the City University of New York), Flushing, N.Y	3	Coed	Public	22,464
Queens College, Charlotte, N.C	2	W	Pvt-Presbyterian	933
Queen's University, Kingston, Ontario	4	Coed	Private	4,130
Queensborough Community College (of the City University of New York), Bayside, N.Y	1	Coed	Public	3,660
Quincy College, Quincy, Ill	2	Coed	Pvt-Roman Catholic	1,518
Quinnipiac College, Hamden, Conn	2	Coed	Private	2,309
Radcliffe College, Cambridge, Mass	2	W	Private	1,191
Radford College, Radford, Va	3	W	Public	3,122
Randolph-Macon College, Ashland, Va	2	M	Pvt-Methodist	824
Randolph-Macon Woman's College, Lynchburg, Va	2	W	Pvt-Methodist	835
Redlands, University of, Redlands, Calif	3	Coed	Pvt-Baptist	1,625
Reed College, Portland, Oreg	3	Coed	Private	1,052
Reedley College, Reedley, Calif	1	Coed	Public	1,612
Regis College, Denver, Colo	2	M	Pvt-Roman Catholic	1,056
Regis College, Weston, Mass	2	W	Pvt-Roman Catholic	1,260
Reinhardt College, Waleska, Ga	1	Coed	Pvt-Methodist	350
Rensselaer Polytechnic Institute, Troy, N.Y	4	Coed	Private	5,232
Rhode Island, University of, Kingston, R.I	4	Coed	Public	11,861
Rhode Island College, Providence, R.I	3	Coed	Public	4,257
Rhode Island School of Design, Providence, R.I	3	Coed	Private	958
Rice University, Houston, Texas	4	Coed	Private	2,488
Richmond, University of, Richmond, Va	3	Coord	Pvt-Baptist	4,584
Richmond Professional Institute, Richmond, Va	3	Coed	Public	8,076
Ricker College, Houlton, Me	2	Coed	Pvt-Baptist	725
Ricks College, Rexburg, Idaho	1	Coed	Pvt-Latter-day Saints	2,458
Rider College, Trenton, N.J	3	Coed	Private	5,559
Ripon College, Ripon, Wis	2	Coed	Private	947
Riverside City College, Riverside, Calif	1	Coed	Public	8,595

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Rivier College, Nashua, N.H.	3	W	Pvt-Roman Catholic	672
Roanoke College, Salem, Va.	2	Coed	Pvt-Lutheran	1,095
Robert Morris Junior College, Pittsburgh, Pa.	1	Coed	Private	3,990
Roberts Wesleyan College, North Chili, N.Y.	2	Coed	Pvt-Methodist	600
Rochester, University of, Rochester, N.Y.	4	Coed	Private	8,128
Rochester Institute of Technology, Rochester, N.Y.	3	Coed	Private	9,737
Rochester State Junior College, Rochester, Minn.	1	Coed	Public	1,681
Rockford College, Rockford, Ill.	3	Coed	Private	1,308
Rockhurst College, Kansas City, Mo.	2	M	Pvt-Roman Catholic	2,357
Rocky Mountain College, Billings, Mont.	2	Coed	Private	497
Rollins College, Winter Park, Fla.	3	Coed	Private	3,241
Roosevelt University, Chicago, Ill.	3	Coed	Private	6,579
Rosary College, River Forest, Ill.	3	W	Pvt-Roman Catholic	1,177
Rosary Hill College, Buffalo, N.Y.	2	W	Pvt-Roman Catholic	1,103
Rose Polytechnic Institute, Terre Haute, Ind.	3	M	Private	795
Rosemont College, Rosemont, Pa.	2	W	Pvt-Roman Catholic	702
Royal Military College of Canada, Kingston, Ontario	2	M	Public	513
Russell Sage College, Troy, N.Y.	3	W	Private	4,128
Rutgers—The State University of New Jersey, New Brunswick, N.J. (incl. Douglass College)	4	Coord	Public	25,489
Sacramento City College, Sacramento, Calif.	1	Coed	Public	8,766
Sacramento State College, Sacramento, Calif.	3	Coed	Public	12,046
Sacred Heart, College of the, Santurce, P.R.	2	W	Pvt-Roman Catholic	445
Sacred Heart Dominican College, Houston, Texas	2	W	Pvt-Roman Catholic	528
St. Ambrose College, Davenport, Iowa	2	Coord	Pvt-Roman Catholic	1,219
St. Andrews Presbyterian College, Laurinburg, N.C.	2	Coed	Pvt-Presbyterian	931
St. Anselm's College, Manchester, N.H.	2	Coord	Pvt-Roman Catholic	1,429
St. Augustine's College, Raleigh, N.C.	2	Coed	Pvt-Protestant Episcopal	818
St. Benedict, College of, St. Joseph, Minn.	2	W	Pvt-Roman Catholic	678
St. Benedict's College, Atchison, Kans.	2	M	Pvt-Roman Catholic	1,007
St. Bernard College, St. Bernard, Ala.	2	Coed	Pvt-Roman Catholic	679
St. Bernardine of Siena College, Loudonville, N.Y.	3	M	Pvt-Roman Catholic	2,029
St. Bonaventure University, St. Bonaventure, N.Y.	4	Coed	Pvt-Roman Catholic	2,489
St. Catherine, College of, St. Paul, Minn.	2	W	Pvt-Roman Catholic	1,449
St. Cloud State College, St. Cloud, Minn.	3	Coed	Public	6,454
St. Dunstan's University, Charlottetown, P.E.I.	2	Coed	Pvt-Roman Catholic	581
St. Edward's University, Austin, Texas	2	M	Pvt-Roman Catholic	739
St. Elizabeth, College of, Convent Station, N.J.	2	W	Pvt-Roman Catholic	971
St. Francis, College of, Joliet, Ill.	3	W	Pvt-Roman Catholic	723
St. Francis College, Fort Wayne, Ind.	3	Coed	Pvt-Roman Catholic	1,519
St. Francis College, Brooklyn, N.Y.	2	M	Pvt-Roman Catholic	2,139
St. Francis College, Loretto, Pa.	3	Coed	Pvt-Roman Catholic	1,465
St. Francis Xavier University, Antigonish, Nova Scotia	3	Coed	Pvt-Roman Catholic	2,198
St. John College of Cleveland, Ohio	3	W	Pvt-Roman Catholic	989
St. John Fisher College, Rochester, N.Y.	2	M	Pvt-Roman Catholic	1,019
St. John's College, Winfield, Kans.	1	Coed	Pvt-Lutheran	351
St. John's College, Annapolis, Md.	3	Coed	Private	487
St. John's College, Camarillo, Calif.	2	M	Pvt-Roman Catholic	376
St. John's College (of the University of Manitoba), Winnipeg, Man.	3	Coed	Pvt-Anglican	374
St. Johns River Junior College, Palatka, Fla.	1	Coed	Public	2,383
St. John's University, Collegeville, Minn.	3	M	Pvt-Roman Catholic	1,438
St. John's University, Jamaica, N.Y.	4	Coed	Pvt-Roman Catholic	13,125
St. Joseph College, West Hartford, Conn.	3	W	Pvt-Roman Catholic	781
St. Joseph College, Emmitsburg, Md.	2	W	Pvt-Roman Catholic	675
St. Joseph's College, North Windham, Me.	2	W	Pvt-Roman Catholic	387
St. Joseph's College, Rensselaer, Ind.	2	Coed	Pvt-Roman Catholic	2,418
St. Joseph's College, Philadelphia, Pa.	3	M	Pvt-Roman Catholic	6,897
St. Joseph's College for Women, Brooklyn, N.Y.	2	W	Pvt-Roman Catholic	714
St. Joseph's Seminary & College, Yonkers, N.Y.	3	M	Pvt-Roman Catholic	308
St. Lawrence University, Canton, N.Y.	3	Coed	Private	1,886
St. Louis, Junior College District of, St. Louis, Mo.	1	Coed	Public	6,922
St. Louis College of Pharmacy, St. Louis, Mo.	2	Coed	Private	445

Name and Location	Level of Instruction	Student Body	Control	Enrollment
St. Louis University, St. Louis, Mo. (incl. St. Mary's College, St. Mary's, Kans.)	4	Coed	Pvt-Roman Catholic	10,497
St. Martin's College, Olympia, Wash.	2	M	Pvt-Roman Catholic	572
St. Mary, College of, Omaha, Nebr.	2	W	Pvt-Roman Catholic	636
St. Mary College (of the University of Montreal), Montreal, Quebec	2	Coed	Pvt-Roman Catholic	884
St. Mary College, Xavier, Kans.	3	W	Pvt-Roman Catholic	618
St. Mary of the Plains College, Dodge City, Kans.	2	Coed	Pvt-Roman Catholic	642
St. Mary of the Springs, College of, Columbus, Ohio	2	Coed	Pvt-Roman Catholic	948
St. Mary-of-the-Woods College, St. Mary-of-the-Woods, Ind.	2	W	Pvt-Roman Catholic	669
St. Mary's College, Notre Dame, Ind.	4	W	Pvt-Roman Catholic	1,424
St. Mary's College, Winona, Minn.	3	M	Pvt-Roman Catholic	1,097
St. Mary's College of California, St. Mary's College, Calif.	2	M	Pvt-Roman Catholic	995
St. Mary's College of Maryland, St. Mary's City, Md.	1	Coed	Public	449
St. Mary's Dominican College, New Orleans, La.	2	W	Pvt-Roman Catholic	542
St. Mary's Junior College, Minneapolis, Minn.	1	Coed	Pvt-Roman Catholic	533
St. Mary's Junior College, Raleigh, N.C.	1	W	Pvt-Protestant Episcopal	284
St. Mary's Seminary & University, Baltimore, Md.	4	M	Pvt-Roman Catholic	817
St. Mary's University, Halifax, N.S.	3	Coed	Pvt-Roman Catholic	951
St. Mary's University of San Antonio, Texas	3	Coed	Pvt-Roman Catholic	3,249
St. Meinrad Seminary, St. Meinrad, Ind.	2	M	Pvt-Roman Catholic	416
St. Michael's College, University of (of the University of Toronto), Toronto, Ontario	2	Coed	Pvt-Roman Catholic	1,720
St. Michael's College, Winooski, Vt.	3	M	Pvt-Roman Catholic	1,294
St. Norbert College, West De Pere, Wis.	2	Coed	Pvt-Roman Catholic	1,484
St. Olaf College, Northfield, Minn.	2	Coed	Pvt-Lutheran	2,336
St. Paul Bible College, St. Paul, Minn.	2	Coed	Pvt-Christian & Missionary Alliance	375
St. Paul's College, Lawrenceville, Va.	2	Coed	Pvt-Protestant Episcopal	438
St. Paul's College (of the University of Manitoba), Winnipeg, Manitoba	3	Coed	Pvt-Roman Catholic	443
St. Peter's College, Jersey City, N.J.	2	Coed	Pvt-Roman Catholic	2,959
St. Peter's Seminary College of Arts (of the University of Western Ontario), London, Ontario	2	M	Pvt-Roman Catholic	360
St. Petersburg Junior College, St. Petersburg, Fla.	1	Coed	Public	7,918
St. Philip's College, San Antonio, Texas	1	Coed	Public	...[5]
St. Procopius College, Lisle, Ill.	2	M	Pvt-Roman Catholic	815
St. Rose, College of, Albany, N.Y.	3	W	Pvt-Roman Catholic	1,491
St. Scholastica, College of, Duluth, Minn.	2	W	Pvt-Roman Catholic	540
St. Teresa, College of, Winona, Minn.	2	W	Pvt-Roman Catholic	1,257
St. Thomas, College of, St. Paul, Minn.	3	M	Pvt-Roman Catholic	2,105
St. Thomas, University of, Houston, Texas	2	Coed	Pvt-Roman Catholic	872
St. Vincent College, Latrobe, Pa.	3	M	Pvt-Roman Catholic	938
St. Xavier College, Chicago, Ill.	3	W	Pvt-Roman Catholic	1,038
Salem College, Winston-Salem, N.C.	2	W	Pvt-Moravian	544
Salem College, Salem, W.Va.	2	Coed	Pvt-Baptist	1,746
Salisbury State College, Salisbury, Md.	3	Coed	Public	771
Salmon P. Chase College, School of Law, Cincinnati, Ohio	2	Coed	Pvt-YMCA	264
Salve Regina College, Newport, R.I.	2	W	Pvt-Roman Catholic	776
Sam Houston State College, Huntsville, Texas	3	Coed	Public	6,524
Samford University, Birmingham, Ala.	2	Coed	Pvt-Baptist	2,780
San Antonio College, San Antonio, Texas (incl. St. Philip's College, q.v.)	1	Coed	Public	10,448
San Bernardino Valley College, San Bernardino, Calif.	1	Coed	Public	11,460
San Diego, University of, College for Men, San Diego, Calif.	2	M	Pvt-Roman Catholic	393
San Diego, University of, College for Women, San Diego, Calif.	3	W	Pvt-Roman Catholic	734
San Diego Junior Colleges (incl. San Diego City, San Diego Mesa, San Diego Evening College	1	Coed	Public	14,430
San Diego State College, San Diego, Calif.	3	Coed	Public	18,366
San Fernando Valley State College, Northridge, Calif.	3	Coed	Public	13,399

Name and Location	Level of Instruction	Student Body	Control	Enrollment
San Francisco, City College of, San Francisco, Calif.	1	Coed	Public	10,815
San Francisco, University of, San Francisco, Calif.	3	Coed	Pvt-Roman Catholic	5,564
San Francisco Art Institute College, San Francisco, Calif.	3	Coed	Private	434
San Francisco College for Women, San Francisco, Calif.	3	W	Pvt-Roman Catholic	734
San Francisco State College, San Francisco, Calif.	3	Coed	Public	20,910
San Francisco Theol. Seminary, San Anselmo, Calif.	4	Coed	Pvt-Presbyterian	323
San Joaquin Delta College, Stockton, Calif.	1	Coed	Public	6,789
San Jose City College, San Jose, Calif.	1	Coed	Public	9,703
San Jose State College, San Jose, Calif.	3	Coed	Public	23,300
San Mateo, College of, San Mateo, Calif.	1	Coed	Public	15,893
Santa Ana College, Santa Ana, Calif.	1	Coed	Public	6,062
Santa Barbara City College, Santa Barbara, Calif.	1	Coed	Public	3,465
Santa Clara, University of, Santa Clara, Calif.	3	Coed	Pvt-Roman Catholic	4,782
Santa Fe, College of, Santa Fe, N.M.	2	M	Pvt-Roman Catholic	979
Santa Monica City College, Santa Monica, Calif.	1	Coed	Public	12,330
Santa Rosa Junior College, Santa Rosa, Calif.	1	Coed	Public	6,818
Sarah Lawrence College, Bronxville, N.Y.	3	W	Private	629
Saskatchewan, University of, Saskatoon, Sask.	4	Coed	Public	10,583
Savannah State College, Savannah, Ga.	2	Coed	Public	1,408
Scranton, University of, Scranton, Pa.	3	M	Pvt-Roman Catholic	2,849
Scripps College, Claremont, Calif.	2	W	Private	395
Seattle Pacific College, Seattle, Wash.	3	Coed	Pvt-Methodist	1,920
Seattle University, Seattle, Wash.	3	Coed	Pvt-Roman Catholic	4,174
Sequoias, College of the, Visalia, Calif.	1	Coed	Public	4,933
Seton Hall University, South Orange, N.J.	3	Coord	Pvt-Roman Catholic	9,173
Seton Hill College, Greensburg, Pa.	2	W	Pvt-Roman Catholic	1,003
Shasta College, Redding, Calif.	1	Coed	Public	3,120
Shaw University, Raleigh, N.C.	2	Coed	Pvt-Baptist	766
Shenandoah College & Shenandoah Conservatory of Music, Winchester, Va.	2	Coed	Pvt-Brethren	605
Shepherd College, Shepherdstown, W.Va.	2	Coed	Public	1,245
Sherbrooke, Université de, Sherbrooke, Quebec	3	Coed	Pvt-Roman Catholic	3,633
Shimer College, Mount Carroll, Ill.	2	Coed	Private	481
Shippensburg State College, Shippensburg, Pa.	3	Coed	Public	3,093
Shoreline Community College, Seattle, Wash.	1	Coed	Public	1,610
Shorter College, Rome, Ga.	2	Coed	Pvt-Baptist	833
Siena College, Memphis, Tenn.	2	W	Pvt-Roman Catholic	372
Siena Heights College, Adrian, Mich.	3	W	Pvt-Roman Catholic	803
Sierra College, Rocklin, Calif.	1	Coed	Public	2,389
Simmons College, Boston, Mass.	3	W	Private	1,975
Simpson College, Indianola, Iowa	2	Coed	Pvt-Methodist	909
Sinclair College, Dayton, Ohio	1	Coed	Private	1,445
Sioux Falls College, Sioux Falls, S.Dak.	2	Coed	Pvt-Baptist	1,008
Sir George Williams University, Montreal, Quebec	2	Coed	Pvt-YMCA	3,811
Siskiyous, College of the, Weed, Calif.	1	Coed	Public	626
Skagit Valley College, Mount Vernon, Wash.	1	Coed	Public	1,385
Skidmore College, Saratoga Springs, N.Y.	2	W	Private	1,448
Slippery Rock State College, Slippery Rock, Pa.	2	Coed	Public	3,163
Smith College, Northampton, Mass.	4	W	Private	2,322
Snead Junior College, Boaz, Ala.	1	Coed	Pvt-Methodist	611
Solano College, Whitney, Calif.	1	Coed	Public	3,573
Sonoma State College, Rohnert Park, Calif.	2	Coed	Public	2,092
South, University of the, Sewanee, Tenn.	3	M	Pvt-Protestant Episcopal	889
South Carolina, Medical College of, Charleston, S.C.	4	Coed	Public	717
South Carolina, University of, Columbia, S.C.	4	Coed	Public	10,998
South Carolina State College, Orangeburg, S.C.	3	Coed	Public	1,695
South Dakota, University of, Vermillion, S.Dak.	4	Coed	Public	4,103
South Dakota School of Mines & Technology, Rapid City, S.Dak.	3	Coed	Public	1,239
South Dakota State University, Brookings, S.Dak.	4	Coed	Public	4,779
South Florida, University of, Tampa, Fla.	3	Coed	Public	7,795
South Georgia College, Douglas, Ga.	1	Coed	Public	990
South Plains College, Levelland, Texas	1	Coed	Public	1,104
South Texas College, Houston, Texas	2	Coed	Pvt-YMCA	3,584
Southeast Missouri State College, Cape Girardeau, Mo.	2	Coed	Public	5,185
Southeastern Baptist Theological Seminary, Wake Forest, N.C.	2	Coed	Pvt-Baptist	516
South-Eastern Bible College, Lakeland, Fla.	2	Coed	Pvt-Assemblies of God	340
Southeastern Louisiana College, Hammond, La.	3	Coed	Public	4,581
Southeastern Massachusetts Technological Institute, North Dartmouth, Mass.	3	Coed	Public	3,370
Southeastern State College, Durant, Okla.	3	Coed	Public	2,239
Southeastern University, Washington, D.C.	2	Coed	Private	1,069
Southern Baptist College, Walnut Ridge, Ark.	1	Coed	Pvt-Baptist	609
Southern Baptist Theological Seminary, Louisville, Ky.	4	Coed	Pvt-Baptist	879
Southern California, University of, Los Angeles, Calif.	4	Coed	Private	18,623
Southern California College, Costa Mesa, Calif.	2	Coed	Pvt-Assemblies of God	445
Southern College of Optometry, Memphis, Tenn.	2	Coed	Private	296
Southern Colorado State College, Pueblo, Colo.	2	Coed	Public	5,118
Southern Connecticut State College, New Haven, Conn.	3	Coed	Public	6,506
Southern Illinois University, Carbondale, Ill.	4	Coed	Public	25,002
Southern Methodist University, Dallas, Texas	4	Coed	Pvt-Methodist	8,431
Southern Missionary College, Collegedale, Tenn.	2	Coed	Pvt-Seventh-day Adventist	1,125
Southern Mississippi, University of, Hattiesburg, Miss.	4	Coed	Public	7,637
Southern Oregon College, Ashland, Oreg.	3	Coed	Public	3,202
Southern Seminary Junior College, Buena Vista, Va.	1	W	Private	316
Southern State College, Magnolia, Ark.	2	Coed	Public	2,289
Southern State College, Springfield, S.Dak.	2	Coed	Public	1,114
Southern University & Agricultural & Mechanical College, Baton Rouge, La.	3	Coed	Public	7,750
Southern Utah, College of, Cedar City, Utah	2	Coed	Public	1,700
Southwest Baptist College, Bolivar, Mo.	1	Coed	Pvt-Baptist	941
Southwest Mississippi Junior College, Summit, Miss.	1	Coed	Public	485
Southwest Missouri State College, Springfield, Mo.	2	Coed	Public	5,372
Southwest Texas Junior College, Uvalde, Texas	1	Coed	Public	716
Southwest Texas State College, San Marcos, Texas	3	Coed	Public	5,579
Southwestern Assemblies of God College, Waxahachie, Texas	2	Coed	Pvt-Assemblies of God	512
Southwestern at Memphis, Tenn.	2	Coed	Pvt-Presbyterian	993
Southwestern Baptist Theological Seminary, Fort Worth, Texas	4	Coed	Pvt-Baptist	1,590
Southwestern College, Chula Vista, Calif.	1	Coed	Public	3,622
Southwestern College, Winfield, Kans.	2	Coed	Pvt-Methodist	718
Southwestern Louisiana, University of, Lafayette, La.	3	Coed	Public	8,447
Southwestern Oregon Community College, Coos Bay, Oreg.	1	Coed	Public	1,247
Southwestern State College, Weatherford, Okla.	3	Coed	Public	4,075
Southwestern University, Georgetown, Texas	2	Coed	Pvt-Methodist	815
Spartanburg Junior College, Spartanburg, S.C.	1	Coed	Pvt-Methodist	613
Spelman College, Atlanta, Ga.	2	W	Pvt-Baptist	723
Spring Arbor College, Spring Arbor, Mich.	2	Coed	Pvt-Methodist	566
Spring Hill College, Mobile, Ala.	3	Coed	Pvt-Roman Catholic	1,265
Springfield College, Springfield, Mass.	4	Coed	Private	2,045
Springfield Junior College, Springfield, Ill.	1	Coed	Pvt-Roman Catholic	1,001
Stanford University, Palo Alto, Calif.	4	Coed	Private	11,166
Stanislaus State College, Turlock, Calif.	3	Coed	Public	1,302
Staten Island Community College (of the City University of New York), Staten Island, N.Y.	1	Coed	Public	2,549
Stephen F. Austin State College, Nacogdoches, Texas	3	Coed	Public	5,783
Stephens College, Columbia, Mo.	2	W	Private	2,000
Sterling College, Sterling, Kans.	2	Coed	Pvt-Presbyterian	612
Stetson University, De Land, Fla.	3	Coed	Pvt-Baptist	2,475
Steubenville, College of, Steubenville, Ohio	2	Coed	Pvt-Roman Catholic	1,085
Stevens Henager College, Salt Lake City, Utah	1	Coed	Private	818
Stevens Institute of Technology, Hoboken, N.J.	4	M	Private	2,516
Stillman College, Tuscaloosa, Ala.	2	Coed	Pvt-Presbyterian	634
Stonehill College, North Easton, Mass.	2	Coed	Pvt-Roman Catholic	1,213
Stout State College, Menomonie, Wis.	3	Coed	Public	2,827
Stratford College, Danville, Va.	1	W	Private	437
Strayer Junior College, Washington, D.C.	1	Coed	Private	1,446
Sue Bennett College, London, Ky.	1	Coed	Pvt-Methodist	330

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Suffolk Community College, Selden, N.Y.	1	Coed	Public	4,481
Suffolk University, Boston, Mass.	3	Coed	Private	2,872
Sul Ross State College, Alpine, Texas	3	Coed	Public	1,711
Sullins College, Bristol, Va.	1	W	Private	498
Susquehanna University, Selinsgrove, Pa.	2	Coed	Pvt-Lutheran	1,141
Swarthmore College, Swarthmore, Pa.	3	Coed	Private	1,026
Sweet Briar College, Sweet Briar, Va.	2	W	Private	709
Syracuse University, Syracuse, N.Y.	4	Coed	Private	21,658
Tabor College, Hillsboro, Kans.	2	Coed	Pvt-Mennonite Brethren	383
Taft College, Taft, Calif.	1	Coed	Public	731
Talladega College, Talladega, Ala.	2	Coed	Private	384
Tampa, University of, Tampa, Fla.	2	Coed	Private	2,338
Tarkio College, Tarkio, Mo.	2	Coed	Pvt-Presbyterian	788
Tarlton State College, Stephenville, Texas	2	Coed	Public	1,997
Taylor University, Upland, Ind.	2	Coed	Private	1,016
Temple Junior College, Temple, Texas	1	Coed	Public	1,249
Temple University, Philadelphia, Pa.	4	Coed	Private	28,285
Tennessee, University of, Knoxville, Tenn	4	Coed	Public	23,862
Tennessee Agricultural & Industrial State University, Nashville, Tenn.	3	Coed	Public	5,095
Tennessee Technological University, Cookeville, Tenn.	3	Coed	Public	5,030
Tennessee Wesleyan College, Athens, Tenn.	2	Coed	Pvt-Methodist	829
Texarkana College, Texarkana, Texas	1	Coed	Public	1,646
Texas, University of, Austin, Texas	4	Coed	Public	28,790
Texas Agricultural & Mechanical University, College Station, Texas	4	Coord	Public	9,521
Texas Christian University, Fort Worth, Texas	4	Coed	Pvt-Christian	7,232
Texas College of Arts and Industries, Kingsville, Texas	3	Coed	Public	4,851
Texas Lutheran College, Seguin, Texas	2	Coed	Pvt-Lutheran	926
Texas Southern University, Houston, Texas	3	Coed	Public	4,389
Texas Southmost College, Brownsville, Texas	1	Coed	Public	924
Texas Technological College, Lubbock, Texas	4	Coed	Public	16,305
Texas Wesleyan College, Fort Worth, Texas	3	Coed	Pvt-Methodist	1,848
Texas Woman's University, Denton, Texas	4	W	Public	3,658
Thiel College, Greenville, Pa.	2	Coed	Pvt-Lutheran	1,174
Thornton Junior College, Harvey, Ill.	1	Coed	Public	2,673
Tiffin University, Tiffin, Ohio	2	Coed	Private	327
Tift College, Forsyth, Ga.	2	W	Pvt-Baptist	628
Toledo, University of, Toledo, Ohio	4	Coed	Public	10,464
Toronto, University of, Toronto, Ontario (incl. University of St. Michael's College, University of Trinity College, & Victoria University, qq.v.)	4	Coed	Public	17,810
Tougaloo College, Tougaloo, Miss.	2	Coed	Pvt-Interdenominational	609
Towson State College, Baltimore, Md.	3	Coed	Public	4,748
Transylvania College, Lexington, Ky.	2	Coed	Private	794
Treasure Valley Community College, Ontario, Oreg.	1	Coed	Public	852
Trenton Junior College, Trenton, N.J.	1	Coed	Public	1,824
Trenton State College, Trenton, N.J.	3	Coed	Public	7,245
Trinidad State Junior College, Trinidad, Colo.	1	Coed	Public	1,198
Trinity College, Hartford, Conn.	3	M	Private	1,671
Trinity College, Washington, D.C.	2	W	Pvt-Roman Catholic	1,034
Trinity College, Burlington, Vt.	2	W	Pvt-Roman Catholic	483
Trinity College, University of (of the University of Toronto), Toronto, Ont.	4	Coed	Pvt-Anglican	780
Trinity University, San Antonio, Texas	3	Coed	Pvt-Presbyterian	2,677
Tri-State College, Angola, Ind.	2	Coed	Private	1,782
Troy State College, Troy, Ala.	3	Coed	Public	3,487
Truett McConnell College, Cleveland, Ga.	1	Coed	Pvt-Baptist	360
Tufts University, Medford, Mass.	4	Coed	Private	5,015
Tulane University of Louisiana, New Orleans, La.	4	Coed	Private	8,082
Tulsa, University of, Tulsa, Okla.	4	Coed	Private	6,170
Tusculum College, Greeneville, Tenn.	2	Coed	Private	495
Tuskegee Institute, Tuskegee Institute, Ala.	3	Coed	Private	2,751
Tyler Junior College, Tyler, Texas	1	Coed	Public	2,991

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Union College, Barbourville, Ky.	3	Coed	Pvt-Methodist	937
Union College, Lincoln, Nebr.	2	Coed	Pvt-Seventh-day Adventist	1,058
Union College and University, Schenectady, N.Y.	4	M	Private	3,340
Union Junior College, Cranford, N.J.	1	Coed	Private	1,393
Union Theological Seminary, New York, N.Y.	4	Coed	Pvt-Interdenominational	553
Union University, Jackson, Tenn.	2	Coed	Pvt-Baptist	958
United College (of the University of Manitoba), Winnipeg, Manitoba	3	Coed	Pvt-United Church	1,547
United States Air Force Academy, Colorado Springs, Colo.	2	M	Public	2,862
United States Coast Guard Academy, New London, Conn.	2	M	Public	687
United States Merchant Marine Academy, King's Point, N.Y.	2	M	Public	998
United States Military Academy, West Point, N.Y.	2	M	Public	3,094
United States Naval Academy, Annapolis, Md.	2	M	Public	4,113
United States Naval Postgraduate School, Monterey, Calif.	4	M	Public	1,417
University of Texas at El Paso, The	3	Coed	Public	7,422
Upper Iowa University, Fayette, Iowa	2	Coed	Private	1,170
Upsala College, East Orange, N.J.	2	Coed	Pvt-Lutheran	1,976
Ursinus College, Collegeville, Pa.	2	Coed	Private	1,020
Ursuline College, Louisville, Ky.	2	W	Pvt-Roman Catholic	471
Ursuline College, Cleveland, Ohio	2	W	Pvt-Roman Catholic	375
Utah, University of, Salt Lake City, Utah (incl. College of Eastern Utah, Price)	4	Coed	Public	17,157
Utah State University of Agriculture & Applied Science, Logan, Utah (incl. Snow College, Ephraim)	4	Coed	Public	9,347
Valdosta State College, Valdosta, Ga.	2	Coed	Public	1,657
Valley City State College, Valley City, N.Dak.	2	Coed	Public	1,252
Valparaiso University, Valparaiso, Ind.	3	Coed	Pvt-Lutheran	4,120
Vanderbilt University, Nashville, Tenn.	4	Coed	Private	4,917
Vassar College, Poughkeepsie, N.Y.	3	W	Private	1,663
Ventura College, Ventura, Calif.	1	Coed	Public	6,825
Vermont, University of, & State Agricultural College, Burlington, Vt.	4	Coed	Public	4,463
Vermont College, Montpelier, Vt.	1	W	Private	515
Victor Valley College, Victorville, Calif.	1	Coed	Public	1,277
Victoria, University of, Victoria, British Columbia	2	Coed	Public	2,934
Victoria College, Victoria, Texas	1	Coed	Public	1,471
Victoria University, Toronto, Ontario	4	Coed	Pvt-United Church	2,482
Villa Madonna College, Covington, Ky.	2	Coed	Pvt-Roman Catholic	1,756
Villa Maria College, Erie, Pa.	2	W	Pvt-Roman Catholic	810
Villanova University, Villanova, Pa.	3	Coord	Pvt-Roman Catholic	7,722
Vincennes University, Vincennes, Ind.	1	Coed	Public	1,539
Virginia, Medical College of, Richmond, Va.	4	Coed	Public	1,419
Virginia, University of, Charlottesville, Va. (incl. Mary Washington College, Fredericksburg)	4	Coord	Public	19,199
Virginia Intermont College, Bristol, Va.	1	W	Pvt-Baptist	491
Virginia Military Institute, Lexington, Va.	2	M	Public	1,228
Virginia Polytechnic Institute, Blacksburg, Va.	4	Coed	Public	8,227
Virginia State College, Petersburg, Va.	3	Coed	Public	5,876
Virginia Union University, Richmond, Va.	2	Coed	Pvt-Baptist	1,382
Viterbo College, La Crosse, Wis.	2	W	Pvt-Roman Catholic	550
Voorhees College, Denmark, S.C.	1	Coed	Pvt-Episcopal	377
Wabash College, Crawfordsville, Ind.	2	M	Private	885
Wagner College, Staten Island, N.Y.	3	Coed	Pvt-Lutheran	2,589
Wake Forest College, Winston-Salem, N.C.	4	Coord	Pvt-Baptist	2,996
Waldorf College, Forest City, Iowa	1	Coed	Pvt-Lutheran	565
Walker College, Jasper, Ala.	1	Coed	Private	647
Walla Walla College, College Place, Wash.	3	Coed	Pvt-Seventh-day Adventist	1,706
Warner Pacific College, Portland, Oreg.	2	Coed	Pvt-Church of God	338

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Wartburg College, Waverly, Iowa	2	Coed	Pvt-Lutheran	1,326
Washburn University of Topeka, Kans	3	Coed	Public	4,493
Washington, University of, Seattle, Wash	4	Coed	Public	28,931
Washington and Jefferson College, Washington, Pa	3	M	Private	907
Washington and Lee University, Lexington, Va	2	M	Private	1,337
Washington Bible College, Washington, D.C	2	Coed	Private	533
Washington College, Chesterton, Md	2	Coed	Private	616
Washington State University, Pullman, Wash	4	Coed	Public	10,500
Washington University, St. Louis, Mo	4	Coed	Private	13,725
Waterloo, University of, Waterloo, Ontario	4	Coed	Private	4,428
Waterloo Lutheran University, Waterloo, Ontario	4	Coed	Pvt-Lutheran	2,223
Wayland Baptist College, Plainview, Texas	2	Coed	Pvt-Baptist	768
Wayne State College, Wayne, Nebr	3	Coed	Public	2,436
Wayne State University, Detroit, Mich	4	Coed	Public	29,125
Waynesburg College, Waynesburg, Pa	2	Coed	Pvt-Presbyterian	1,079
Weatherford College, Weatherford, Texas	1	Coed	Public	953
Weber State College, Ogden, Utah	2	Coed	Public	7,416
Webster College, Webster Groves, Mo	2	W	Pvt-Roman Catholic	1,048
Wellesley College, Wellesley, Mass	3	W	Private	1,765
Wells College, Aurora, N.Y	3	W	Private	567
Wenatchee Valley College, Wenatchee, Wash	1	Coed	Public	1,350
Wesley College, Dover, Del	1	Coed	Pvt-Methodist	760
Wesleyan College, Macon, Ga	2	W	Pvt-Methodist	709
Wesleyan University, Middletown, Conn	3	M	Private	1,455
West Chester State College, West Chester, Pa	3	Coed	Public	5,462
West Coast University, Los Angeles, Calif	3	Coed	Private	1,017
West Liberty State College, West Liberty, W.Va	2	Coed	Public	2,739
West Georgia College, Carrollton, Ga	2	Coed	Public	2,259
West Texas State University, Canyon, Texas	3	Coed	Public	5,328
West Virginia Institute of Technology, Montgomery, W.Va	2	Coed	Public	2,009
West Virginia State College, Institute, W.Va	2	Coed	Public	2,907
West Virginia University, Morgantown, W.Va	4	Coed	Public	12,743
West Virginia Wesleyan College, Buckhannon, W.Va	2	Coed	Pvt-Methodist	1,542
Westbrook Junior College, Portland, Me	2	W	Private	396
Western Baptist Bible College and Theological Seminary, El Cerrito, Calif	2	Coed	Pvt-Baptist	339
Western Carolina College, Cullowhee, N.C	3	Coed	Public	3,317
Western College for Women, Oxford, Ohio	2	W	Private	563
Western Illinois University, Macomb, Ill	3	Coed	Public	6,466
Western Kentucky College, Bowling Green, Ky	3	Coed	Public	8,272
Western Maryland College, Westminster, Md	3	Coed	Pvt-Methodist	1,116
Western Michigan University, Kalamazoo, Mich	3	Coed	Public	17,672
Western Montana College, Dillon, Mont	3	Coed	Public	857
Western New England College, Springfield, Mass	3	Coed	Private	2,112
Western New Mexico University, Silver City, N.Mex	3	Coed	Public	1,258
Western Ontario, University of, London, Ontario (incl. Huron College & St. Peter's Seminary College of Arts, qq.v.)	4	Coed	Private	7,105
Western Reserve University, Cleveland, Ohio	4	Coed	Private	8,805
Western State College of Colorado, Gunnison, Colo	3	Coed	Public	2,695
Western Washington State College, Bellingham, Wash	3	Coed	Public	5,475
Westmar College, Le Mars, Iowa	2	Coed	Pvt-Brethren	954
Westminster College, Fulton, Mo	2	M	Pvt-Presbyterian	675
Westminster College, New Wilmington, Pa	3	Coed	Pvt-Presbyterian	1,926
Westminster College, Salt Lake City, Utah	2	Coed	Pvt-Interdenominational	602
Westmont College, Santa Barbara, Calif	2	Coed	Private	615
Wharton County Junior College, Wharton, Texas	1	Coed	Public	1,880
Wheaton College, Wheaton, Ill	3	Coed	Private	1,864
Wheaton College, Norton, Mass	2	W	Private	1,090
Wheeling College, Wheeling, W.Va	2	Coed	Pvt-Roman Catholic	735
Wheelock College, Boston, Mass	3	W	Private	489
Whitman College, Walla Walla, Wash	2	Coed	Private	1,051
Whittier College, Whittier, Calif	3	Coed	Private	1,990
Whitworth College, Spokane, Wash	3	Coed	Private	1,829
Wichita State University, Wichita, Kans	4	Coed	Public	10,362
Wilberforce University, Wilberforce, Ohio	2	Coed	Pvt-Methodist Episcopal	612
Wiley College, Marshall, Texas	2	Coed	Pvt-Methodist	578
Wilkes College, Wilkes-Barre, Pa	3	Coed	Private	2,335
Willamette University, Salem, Oreg	3	Coed	Pvt-Methodist	1,493
William and Mary, College of, Williamsburg, Va	3	Coed	Public	6,538
William Carey College, Hattiesburg, Miss	2	Coed	Pvt-Baptist	779
William Jewell College, Liberty, Mo	2	Coed	Pvt-Baptist	1,017
William Mitchell College of Law, St. Paul, Minn	2	Coed	Private	362
William Penn College, Oskaloosa, Iowa	2	Coed	Pvt-Friends	996
William Woods College, Fulton, Mo	2	W	Pvt-Disciples of Christ	644
Williams College, Williamstown, Mass	3	M	Private	1,310
Willimantic State College, Willimantic, Conn	3	Coed	Public	1,440
Wilmington College, Wilmington, N.C	2	Coed	Public	1,055
Wilmington College, Wilmington, Ohio	2	Coed	Pvt-Friends	901
Wilson College, Chambersburg, Pa	2	W	Private	674
Windsor, University of, Windsor, Ont	4	Coed	Private	2,351
Wingate College, Wingate, N.C	1	Coed	Pvt-Baptist	1,472
Winona State College, Winona, Minn	3	Coed	Public	2,991
Winston-Salem State College, Winston-Salem, N.C	2	Coed	Public	1,242
Winthrop College, Rock Hill, S.C	3	W	Public	2,970
Wisconsin, University of, Madison & Milwaukee, Wis	4	Coed	Public	48,524
Wisconsin State University—Eau Claire, Wis	3	Coed	Public	4,608
Wisconsin State University—La Crosse, Wis	3	Coed	Public	3,990
Wisconsin State University—Oshkosh, Wis	2	Coed	Public	7,440
Wisconsin State University—Platteville, Wis	2	Coed	Public	3,693
Wisconsin State University—River Falls, Wis	2	Coed	Public	3,404
Wisconsin State University—Stevens Point, Wis	2	Coed	Public	4,915
Wisconsin State University—Superior, Wis	3	Coed	Public	2,476
Wisconsin State University—Whitewater, Wis	2	Coed	Public	6,322
Wittenberg University, Springfield, Ohio	3	Coed	Pvt-Lutheran	3,098
Wofford College, Spartanburg, S.C	2	M	Pvt-Methodist	989
Woman's Medical College of Pennsylvania, Philadelphia, Pa	4	W	Private	328
Woodbury College, Los Angeles, Calif	2	Coed	Private	2,181
Wooster, College of, Wooster, Ohio	2	Coed	Pvt-Presbyterian	1,532
Worcester Junior College, Worcester, Mass	1	Coed	Private	2,768
Worcester Polytechnic Institute, Worcester, Mass	4	M	Private	1,643
Wyoming, University of, Laramie, Wyo	4	Coed	Public	7,051
Xavier University, New Orleans, La	3	Coed	Pvt-Roman Catholic	908
Xavier University, Cincinnati, Ohio	3	M	Pvt-Roman Catholic	5,194
Yakima Valley College, Yakima, Wash	1	Coed	Public	2,772
Yale University, New Haven, Conn	4	M	Private	8,575
Yankton College, Yankton, S.Dak	2	Coed	Private	611
Yeshiva University, New York, N.Y	4	Coord	Private	4,867
York Junior College, York, Pa	1	Coed	Private	1,811
York University, Toronto, Ont	4	Coed	Public	1,483
Young Harris College, Young Harris, Ga	1	Coed	Pvt-Methodist	576
Youngstown University, Youngstown, Ohio	2	Coed	Private	11,541
Yuba College, Marysville, Calif	1	Coed	Public	3,729

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[1] Included in enrollment for Columbia University. [2] Included under Rutgers University. [3] Included under University of Virginia. [4] Included under University of Maryland. [5] Included under San Antonio College.

COLOMBIA

The coalition National Front government of President Carlos Lleras Restrepo officially observed its first anniversary in office on Aug. 1, 1967. The president, in a report to the nation, was guardedly optimistic over his government's accomplishments, which included stabilization of the country's economy, a higher rate of economic growth, and some progress in the continuing struggle with a recalcitrant Congress. President Lleras also reported some success in dealing with the problem of guerrilla violence in rural areas. The major problems of the National Front—creating a climate of economic growth and social reform while simultaneously dealing with the guerrilla movement—remained, but by the end of 1967, Colombia appeared to be much nearer to solving those problems peacefully than it had been in 1966.

On February 9, in Colombia's worst earthquake in 50 years, the Andean village of Guacamayas was destroyed and 100 persons in various parts of the country were killed. On November 25, in the town of Chiquinquirá, 77 persons died and 300 others became seriously ill as a result of eating bread inadvertently contaminated with an insecticide.

Politics. The stalemate between President Lleras and Congress, in which National Front initiatives had been thwarted by the lack of a two-thirds majority necessary for congressional passage of major government legislation, continued throughout the first nine months of 1967. Especially vexing to the president was the failure of the special session of Congress, which ended on July 20, to approve a series of proposed constitutional reforms. These reforms would have virtually eliminated the two-thirds requirement for the passage of legislation, stabilized the number of senators and representatives and made their terms concurrent with that of the president, and allowed the executive additional freedom in financial matters. However, the subsequent unification of the National Front's Liberal faction with the opposition Liberal Revolutionary Movement (MRL) party in August provided the necessary two-thirds majority in Congress for the passage of government-sponsored legislation. The unification of the Liberal factions in a single party, formalized at the Liberal convention on October 20, also provided an extremely strong political base for the Lleras government.

Predictably, the Liberal unification produced similar attempts among the Conservatives, who, under the alternation formula, will provide the next president, in 1968. By late 1967, however, no unification had been agreed upon, although National Front Conservative leader Belisario Betancur was increasingly mentioned as the potential leader of a unified Conservative party. The impact of the Liberal unification on Colombian politics could be seen in the rapid passage by Congress of constitutional reforms presented to it in October.

Economy. Colombia experienced a pronounced depression during the first half of 1967 as a result of balance of payments difficulties and an unsuccessful effort by the government to use monetary and fiscal policy to halt inflation. In March the government resorted to a concealed devaluation in the form of a new monetary exchange law designed to make Colombia's major exports more attractive to the world market. As a result the Colombian economy recovered strongly during the second half of the year. The economy grew at a rate slightly higher than the 1960–65 average annual rate of 4.5%. Tax collections increased by 30% over 1966, and in October the finance ministry reported a surplus of 811 million pesos. The newly instituted gasoline tax brought in about 700 million pesos or more during 1965.

Foreign Affairs. Colombia continued to be in the forefront of the Bogotá group, formed in 1966 and consisting of Colombia, Ecuador, Venezuela, Peru, and Chile. In a meeting in Quito, Ecuador, in July these countries formed the Andean Development Corporation, to serve as coordinator for economic integration efforts and as financing agent for common industries and services. In August the Colombian government called for action by the Organization of American States aimed at stopping Fidel Castro's support of guerrilla movements in other countries.

ERNEST A. DUFF
Randolph-Macon Woman's College

COLOMBIA • Information Highlights

SOUTH AMERICA

Area: 439,512 square miles (1,138,338 sq km).
Population: 18,068,000 (July 15, 1965, est.).
Chief Cities (1964 census): Bogotá, the capital, 1,697,311; Medellín, 772,887; Cali, 637,929; Barranquilla, 498,301.
Government: *President*—Carlos Lleras Restrepo (took office Aug. 7, 1966). *Congress*—Senate (party seating, 1967: Liberals, 46; Conservatives, 21; National Popular Alliance, 18; other, 21); House of Representatives, 190 members (party seating, 1967: Liberals, 71; Conservatives, 40; National Popular Alliance, 36; others, 43).
Religious Faiths: Roman Catholics, 97% of population.
Education: *Literacy rate* (1963), 58% of population aged 7 and over. *Total school enrollment* (1964)—2,641,176 (primary, 2,213,423; secondary, 228,646; teacher-training, 52,319; technical, 109,326; higher, 37,462).
Finance (1966 est.): *Revenues,* $369,696,000; *expenditures,* $366,384,000; *public debt,* $624,000,000; *monetary unit,* peso (16.30 pesos equal U. S.$1).
Gross National Product (1965): $3,537,000,000.
National Income (1965): 2,993,392,000; average annual income per person, $148.
Economic Indexes: *Agricultural production* (1965), 133 (1956–57=100); *cost of living* (1966), 239 (1958=100).
Manufacturing (metric tons): Cement (1966), 2,076,000; gasoline (1965), 1,501,000; beer (1964), 629,000; sugar (1966), 572,300; wheat flour (1964), 207,000; crude steel (1966), 174,000; cotton yarn (1964), 5,600.
Crops (metric tons, 1965–66 crop year): Coffee (1966–67), 480,000 (ranks 2d among world producers); maize, 972,000); potatoes, 816,000; rice (1966–67), 700,000.
Minerals (metric tons, 1965): Crude petroleum (1966), 9,936,000; bituminous coal, 3,200,000; iron ore, 350,000; barite, 8,800; gold, 319,362 troy ounces.
Foreign Trade (1966): *Exports,* $506,500,000 (chief exports: coffee, $328,300,000; petroleum, $71,000,000); *imports,* $674,300,000 (chief imports, 1965: nonelectrical machinery, $115,970,000; transport equipment, $54,015,000; motor vehicles, $40,679,000). *Chief trading partners* (1965): U. S. (took 43% of exports, supplied 46% of imports): West Germany (took 11% of exports, supplied 11% of imports).
Transportation: *Roads* (1965), 22,000 miles (35,398 km); *motor vehicles* (1965), 256,596 (automobiles, 137,317); *railways* (1965), 2,164 miles (3,482 km); *merchant vessels* (1966), 25 (146,000 gross registered tons); *national airline,* Avianca; *principal airports,* Barranquilla, Bogotá.
Communications: *Telephones* (1966): 433,000; *TV stations* (1965), 15; *TV sets* (1965), 350,000; *radios* (1963), 3,000,000; *newspapers* (1963), 26 (daily circulation, 781,000).

COLORADO

The 1967 session of the Colorado General Assembly attracted national attention by passing an abortion bill recognized as the most liberal in the 50 states. In signing the controversial bill into law on April 25, Gov. John A. Love promised to keep close watch on its operation.

Economically, 1967 was a good year for Colorado, with new records in tourism, increases in manufacturing plants and jobs, and prospects for increased production of molybdenum, Colorado's biggest money earner among the metals. The area stretching from Denver northward to Fort Collins and southward to Colorado Springs continued to attract research and development firms.

Legislation. The long term of the General Assembly, held in odd-numbered years, convened January 4 and closed May 22. The abortion bill, which modernized a statute dating to Colorado's territorial days, was among the 1,002 pieces of legislation (a record number) introduced during the session. Somewhat fewer than half of these (452) became law.

Major enactments included reapportionment of the Assembly, to become effective at the 1968 general election, and a constitutional amendment proposing that the governor and the lieutenant governor be elected jointly. The latter proposal will be submitted to the voters in 1968. Several bills were passed to strengthen highway safety programs. One bill requires a special motorcycle operators' license, and another permits judges to sentence traffic violators to a drivers' improvement school. Elementary and secondary school relief funds were increased, as were all budgets for higher education. Reorganization of some 130 state agencies into 20 departments, as required by another enactment, is due to be accomplished by mid-1968.

WIDE WORLD

COLORADO'S Governor John A. Love affixes his signature to the state's new and controversial abortion law in April.

COLORADO • Information Highlights

Area: 104,247 square miles (270,000 sq km).
Population: 1,975,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Denver, the capital, 520,000; Pueblo, 98,000; Colorado Springs, 82,000; Aurora, 68,000; Lakewood, 51,000; Boulder, 50,000; Arvada, 37,000.
Government: *Chief Officers*—governor, John A. Love (R); lt. gov., Mark A. Hogan (D); secy. of state, Byron A. Anderson (R); atty. gen., Duke W. Dunbar (R); treas., Virginia Blue; commissioner of education, Byron W. Hansford; chief justice, Robert H. McWilliams. *Legislature*—General Assembly (met Jan. 4, 1967): Senate, 35 members (20 Republicans, 15 Democrats); House of Representatives, 65 members (38 R, 27 D).
Education: *School enrollment* (1965–66)—public elementary, 299,875 pupils (11,425 teachers); public secondary, 204,872 pupils (9,832 teachers); nonpublic schools, 48,600 pupils (1,850 teachers); college and university (fall 1965), 74,285 students. *Public school expenditures* (1965–66)—$240,000,000 ($530 per pupil); average teacher's salary, $6,387.
Public Finance (fiscal year 1967): *Revenues*, $614,153,000 (2% sales tax, $104,899,325; motor fuel tax, $56,640,407; federal funds, $107,633,822). *Expenditures*, $608,637,231 (education, $184,872,799; health, welfare, and safety, $126,718,978; highways, $125,730,434). *State debt*, $129,000,000 (Aug. 1, 1967).
Personal Income (1966): $5,700,000; average annual income per person, $2,916.
Public Assistance (fiscal year 1967): $96,377,339 to 95,467 recipients (aged, $59,982,081; dependent children, $25,283,943).
Labor Force (employed persons, Feb. 1967): *Agricultural*, 46,900; *nonagricultural* (wage and salary earners), 728,800 (13.7% manufacturing, 19.9% trade, 21.3% government). *Unemployed persons* (Feb. 1967)—25,400.
Manufacturing (1965): Value added by manufacture, $1,225,941,000 (printing and publishing, $79,441,000; primary metals, $94,820,000; nonelectrical machinery, $107,531,000; electrical machinery, $64,204,000; fabricated metals, $51,620,000; food and products, $277,762,000).
Agriculture (1966): *Cash farm income*, $888,698,000 (livestock, $618,359,000; crops, $207,869,000; govt. payments, $62,470,000). *Chief crops* (tons)—sugarbeets, 2,322,000 (ranks 2d among the states); hay, 2,862,000; wheat, 1,284,240; potatoes, 573,700; corn for grain, 457,884.
Mining (1966): *Production value*, $366,282,151. *Chief minerals* (tons)—sand and gravel, 22,645,000; crude oil, 6,129,045; coal, 5,227,705; stone, 1,007,307; molybdenum, 28,133.
Fisheries (1965): *Commercial catch*, 153,000 pounds ($9,000).
Transportation: *Roads* (1967), 80,261 miles (129,140 km); *motor vehicles* (1967), 1,371,079; *railroads* (1967), 3,760.79 track miles (6,052 km); *airports with scheduled service* (1967), 11.
Communications (1966): *Telephones*, 1,023,300; *television stations*, 12; *radio stations*, 84; *newspapers* (1967), 26 (daily circulation, 674,555).

Fiscal Measures. The Assembly approved budget appropriations of approximately $350 million for the 1967–68 fiscal year. Of the total, $277 million came from the general fund. The budget included about $74 million for primary and secondary education and $61 million for colleges and universities.

Tourism. The Colorado State Division of Commerce and Development predicted an income in 1967 of $550 million from 7.5 million tourists. Areas in Colorado administered by the National Park Service showed a 5.2% increase in visits. Other attractions with record numbers of visitors included the U. S. Mint in Denver and the highway leading to the summit of Pikes Peak. All indications pointed to another record ski season.

Economy. The Climax Molybdenum Company announced during the year that newly developed ore bodies at its Urad mine, near Empire, will increase the non-Communist world's supply of molybdenum by 5%. From this raw ore, about 7 million pounds of molybdenum will be recovered annually for the next seven years. Colorado is the nation's leading producer of molybdenum.

Manufacturing growth during the year provided approximately 10,000 additional jobs in the state, and 35 new industries were established. Retail sales passed the $1 billion mark.

Ceremonies marking the start of construction of the Pueblo Dam and Pueblo Reservoir (on the Arkansas River) were held at the dam site west of Pueblo on August 26. The dam and reservoir are units of the Fryingpan-Arkansas project—a U. S. Bureau of Reclamation program to divert water from the Fryingpan River and other tributaries of the Roaring Fork (on the western slope of the Rocky Mountains) to the Arkansas River valley (on the populous and water-short eastern slope).

PEARL ANOE
Colorado Feature & Literary Service

COMMERCE. See ECONOMIC REVIEW; INTERNATIONAL TRADE; RETAIL STORE SALES; WHOLESALE SELLING.
COMMON MARKET, European. See EUROPE.

ADEN, key city of South Arabia, is patrolled by British soldiers in gas masks on the lookout for Arab terrorists. All British troops were pulled out of Aden by November 30.

UPI

COMMONWEALTH OF NATIONS

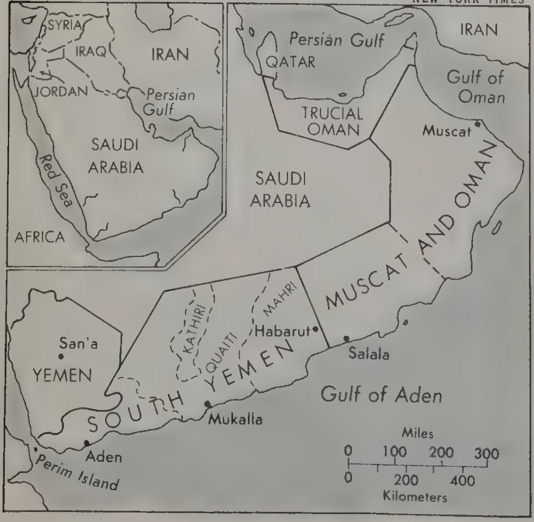
Five territories in the eastern Caribbean area achieved a new, noncolonial status of association with Britain in 1967. The new associated states, and the dates they achieved that status, are: Antigua and St. Kitts-Nevis-Anguilla, February 27; St. Lucia and Dominica, March 1; and Grenada, March 3. Statehood Day for St. Vincent, originally fixed for May 29, was held up by local political uncertainties and postponed indefinitely. The territories gained full control of their internal affairs, while Britain, by agreement, accepted responsibility for their defense and foreign affairs.

Aden and South Arabia became independent on November 30 as the People's Republic of South Yemen.

The Commonwealth of Nations is a voluntary association of sovereign states (some of them republics) and their dependencies, linked by common recognition of Queen Elizabeth II of Britain as the head and symbol of the Commonwealth association.

SOUTH YEMENI LEADERS claim Dhofar, a province in the sultanate of Muscat and Oman, as part of their new republic. Inset shows the sultanate and the Republic of South Yemen in relation to the rest of the Middle Eastern region.

NEW YORK TIMES



Commonwealth Relations. The devaluation of the British pound from $2.80 to $2.40 on November 18 was received sympathetically in the Commonwealth and was followed by the devaluation by varying percentages of currencies of 14 Commonwealth countries. Although no meeting of Commonwealth heads of government was held in 1967, the finance ministers met at Port-of-Spain, Trinidad, on September 20 and 21. Under discussion were aid for the developing countries, prospects for world trade, and international monetary reforms. A Royal Society conference of Commonwealth scientists (the first since 1946) was held at Oxford University, April 7–11, and a conference of senior Commonwealth officials on cooperation in planning, technical assistance, and trade promotion took place at Nairobi, Kenya, from May 24 to June 2.

Protests in Malta over the effect on its economy of the cutback of British forces following Maltese independence resulted in the modification of the British program of military withdrawal from the island. A joint Anglo-Maltese mission was created to make recommendations on the retraining of workers left unemployed by the withdrawal and on the creation of new job opportunities. The mission's report, published on July 18, forms a blueprint for the adjustment of the Maltese economy over the transitional stage. (See also MALTA.)

The Southeast Asia Commonwealth Cable (SEACOM) was officially opened by Queen Elizabeth II on March 30. Financed entirely by Commonwealth countries at a cost of £23.5 million, it is the third and final link in a round-the-world Commonwealth undersea cable begun in 1958 and connects Singapore, Malaysia, Hong Kong, Guam, New Guinea, and Australia.

In June, Kenya, Uganda, and Tanzania signed a treaty of cooperation to strengthen their common services and the East African common market.

Queen Elizabeth and the Duke of Edinburgh visited Canada from June 29 to July 5 to honor the centennial celebrations there. The queen addressed Parliament in both English and French in Ottawa on July 1, the anniversary of confederation.

COMMONWEALTH OF NATIONS

Component	Area (sq. mi.)	Pop. (mid-1966)	Status
Europe			
Great Britain & islands of British seas[1]	94,522	54,744,000	Sovereign state
Gibraltar	2	25,000	Colony
Malta	122	318,000[4]	Sovereign state
Total in Europe	94,646	55,087,000	
Africa			
Botswana	222,000	593,000[4]	Sovereign state
Gambia	4,003	343,000[4]	Sovereign state
Ghana	91,843	7,945,000	Sovereign state
Kenya	224,960	9,643,000	Sovereign state
Lesotho	11,716	865,000	Sovereign state
Malawi	46,066	4,035,000	Sovereign state
Mauritius[2]	809	759,000	Colony
Nigeria	356,668	58,600,000	Sovereign state
Rhodesia[3]	150,333	4,400,000	Internally self-governing colony
St. Helena	47	5,000	Colony
Ascension	34	530	
Tristan da Cunha	81	285[4]	
Seychelles	156	49,000	Colony
Sierra Leone	27,925	2,403,000	Sovereign state
Swaziland	6,704	390,000	Protectorate
Tanzania	362,820	10,717,000	Sovereign state
Uganda	92,525	7,740,000	Sovereign state
Zambia	288,129	3,894,000	Sovereign state
Total in Africa	1,886,819	112,381,815	
America			
Antigua	171	60,000	Associated state
Bahamas	4,400	140,000	Internally self-governing colony
Barbados	166	245,000	Sovereign state
Bermuda	20	51,000[4]	Colony
British Honduras	8,867	113,000[4]	Internally self-governing colony
British Virgin Islands	59	9,000	Colony
Canada	3,851,802	19,919,000	Sovereign state
Cayman Islands	100	9,000	Colony
Dominica	305	68,000	Associated state
Falkland Islands[5]	4,618	2,000	Colony
Grenada	133	97,000	Associated state
Guyana	83,000	662,000	Sovereign state
Jamaica	4,232	1,860,000	Sovereign state
Montserrat	32	14,000	Colony
St. Kitts-Nevis-Anguilla	153	61,000	Associated state
St. Lucia	238	103,000	Associated state
St. Vincent	150	90,000	Colony
Trinidad and Tobago	1,980	1,000,000	Sovereign state
Turks and Caicos	166	6,000	Colony
Total in America	3,960,592	24,509,000	
Asia			
Bahrain[6]	231	193,000	Protectorate state
British Indian Ocean Territory[7]	30	2,000	Colony
Brunei	2,226	104,000	Protectorate state
Ceylon	25,332	11,500,000	Sovereign state
Cyprus	3,572	610,000[4]	Sovereign state
Hong Kong	398	3,716,000	Colony
India	1,176,150	498,680,000	Sovereign state
Jammu and Kashmir	86,023	3,729,000[8]	In dispute
Malaysia	128,430	9,711,000	Sovereign state
Pakistan	365,528	105,044,000	Sovereign state
Qatar[6]	4,000	71,000	Protected state
Sikkim	2,744	180,000	Protected state
Singapore	224	1,914,000	Sovereign state
Trucial States[6]	32,278	130,000	Protected state
Total in Asia	1,827,116	636,639,000	
Oceania			
Australia	2,971,021	11,541,000	Sovereign state
Christmas Island	62	3,000	External territory
Cocos Islands	5	1,000	External territory
Nauru	8	6,000	Trusteeship
New Guinea, Terr.	92,996	1,582,000	Trusteeship
Norfolk Island	14	1,000	External territory
Papua	90,540	601,000	External territory
Fiji	7,055	478,000	Colony
New Hebrides	5,700	70,000	Condominium
New Zealand	103,736	2,676,000	Sovereign state
Pitcairn Island	2	92	Colony
Tonga	269	75,000	Protected state
Western Pacific Islands:			
British Solomon Islands	11,500	140,000	Protectorate
Gilbert and Ellice Islands	349	54,000	Colony
Western Samoa[6]	1,097	130,000	Sovereign state
Total in Oceania	3,284,354	17,358,092	
Grand total	11,053,577	845,974,907	

[1] Includes Northern Ireland, Channel Islands, and Isle of Man. [2] Due to become a sovereign state in March 1968. [3] Rhodesia declared its independence Nov. 11, 1965, but technically retains Commonwealth status. [4] Mid-1967 est. [5] Excludes dependencies. [6] Not an integral part of the Commonwealth. [7] Includes Chagos Archipelago and Aldabra, Farquhar, and Desroches islands. [8] 1964 est. of India—held portion only.

Aden and South Arabia. A major problem facing Britain during 1967 was the question of independence for Aden and South Arabia. In November 1966, Britain requested the help of the United Nations and a month later, the General Assembly authorized a special mission to Aden. When the mission arrived in Aden on April 2, 1967, leaders of the Front for the Liberation of Occupied South Yemen (FLOSY) and the National Liberation Front (NLF), both of which were backed by the United Arab Republic, boycotted the mission and stepped up terrorist activities. Following a week of violent outbreaks, the mission charged the British with lack of cooperation and left Aden.

Sir Humphrey Trevelyan replaced Sir Richard Turnbull as British high commissioner in South Arabia on May 11. He restated Britain's objective of bringing into being an independent state with a broadly based, stable government by means of discussions between all groups, including FLOSY and the NLF.

On June 19, British Foreign Secretary George Brown announced Britain's acceptance of the constitution drafted by the Aden government for an independent South Arabia. The new state, which would include Aden, was to achieve independence on Jan. 9, 1968, under a "caretaker" government, and Britain would provide military protection for six months after independence. British dependents began to withdraw on June 29. Intensified violence and sabotage continued. Reinforcements were sent in on June 28 and 29. British troops began their final withdrawal on August 25.

On September 5, High Commissioner Trevelyan announced the collapse of the federal government in South Arabia and expressed his readiness to discuss formation of an effective government with the nationalist groups. At the invitation of the Arab League, FLOSY and the NLF met in Cairo on September 25 under Egyptian President Nasser's auspices. They agreed to a cease-fire and drew up a joint provisional government. On November 2, having learned that the nationalist forces had reached a tentative agreement on peaceful cooperation, Britain advanced the date for South Arabian indepen-

IN HONG KONG, harassed by Chinese and local Communists, British soldiers guarded the border with China.

UPI

dence and announced its intention of withdrawing entirely from Aden and South Arabia before the end of the month instead of in January 1968. Negotiations over the transfer of power between Britain and the NLF took place in Geneva from November 21 to 29. The last detachments of British troops were withdrawn on November 29 and Aden and South Arabia became officially independent on November 30.

Gibraltar. The question of the future of Gibraltar continued to complicate British relations with Spain in 1967. In accordance with a UN resolution calling on the two countries to negotiate while taking into account the interests of the people of the colony, talks were arranged in April but did not take place because Spain declared a prohibited flying zone in most of the air space around Gibraltar. In June, talks held in Madrid to remove this and other obstacles to negotiations broke down when the Spanish delegation sought prior political concessions from Britain.

Judith Hart, minister of state for Commonwealth affairs, announced on June 14 that a referendum would be held to enable the people of Gibraltar to decide whether they wished to return to Spanish sovereignty or retain their link with Britain. A Commonwealth observer mission arrived in Gibraltar on September 4. The referendum, challenged by both Spain and the United Nations, took place on September 10. The result was overwhelmingly in favor of retaining the British connection (12,138 to 44). The Commonwealth mission reported that the voting had been conducted in a "fair and proper" manner.

Rhodesia. In view of reports that Rhodesia was willing to resume talks on a political settlement with Britain, Prime Minister Harold Wilson announced to the House of Commons in June 1967 that Lord Alport, a former minister of state and British high commissioner in Rhodesia, would visit the country to see whether a basis for such talks existed. Wilson decided after the visit that, although there was some opinion in favor of a negotiated settlement in Rhodesia, there was no conclusive evidence that talks would lead to an acceptable solution. However, Commonwealth Secretary George Thomson had conversations with Sir Humphrey Gibbs, governor of Rhodesia, on November 8 and 9.

Hong Kong. In Hong Kong, demonstrations and riots beginning on May Day (May 1) interrupted the course of daily life and continued for several months. The disturbances included demonstrations in Peking, Shanghai, and Macao, maltreatment of British diplomatic representatives in Peking and Shanghai, Chinese allegations of police brutality, and border incidents. There was little doubt that both Communist China and local Communists were exploiting the situation. Firm action by the Hong Kong government on the scene and by the British government in its dealings with China, however, enabled the colony's normal activities to continue. An accord was reached late in November which eased Communist agitation in the colony after seven months.

Anguilla. In another territorial development, the island of Anguilla seceded in May 1967 from the associated state of St. Kitts-Nevis-Anguilla set up on February 27. The move was prompted by Anguilla's desire to avoid domination by the two other islands. Although an agreement was signed late in July that returned Anguilla to the association, rebel leaders rejected the pact and reaffirmed their independence on August 4.

Cyprus. Trouble flared between Greece and Turkey for two weeks in November following a Cypriot government attack on Turkish Cypriots in two villages on the island of Cyprus. A settlement mediated by the United Nations, the United States, and NATO succeeded in averting further hostilities. (See also CYPRUS).

Elections. Elections were held in several territories throughout the Commonwealth in 1967. Bahamian elections in January put the Progressive Liberal party in office for the first time, with Lynden O. Pindling as prime minister. The new party in power is composed for the most part of people of African descent. The Solomon Islands received a new constitution on March 23 which increased the elected membership of its legislative council. Elections under the new constitution were held from May 15 to early June. In Swaziland, which will become independent by 1970, a new constitution conferring internal self-government went into effect on April 25 following elections on April 19 and 20. Elections took place in Grenada in September, in which the Grenada United Labour party defeated the incumbent Grenada National party.

The Independence party in Mauritius, favoring full independence over some form of association with Britain, was victorious in elections on August 7. At the opening of the new Legislative Assembly August 22, the Assembly voted to seek independence within the Commonwealth. On October 24 the British government announced that the colony of Mauritius would be granted independence on March 12, 1968.

Aid to the Territories. The 14th annual report of the Colombo Plan consultative committee, covering 1965–66, was published in January 1967. It showed that since 1950–51 the total amount of aid provided under the plan by the donor countries (Australia, Britain, Canada, Japan, New Zealand, and the United States) to Southeast Asia was $19.8 billion. Of this, $17 billion was given by the United States.

With the approval of £12.6 million in grants and loans in 1966–67, British aid to the dependent territories under the colonial development and welfare program reached a total of £317 million since 1946, nearly all of it in the form of grants.

British loans to independent Commonwealth countries in 1967 included offers of £3.5 million to Ceylon and £19 million to India and loans of £2.1 million to Pakistan and £4 million to Ghana.

The report of the Commonwealth Development Finance Corporation for 1966–67 showed that the corporation's commitments on March 31, 1967, stood at £36.9 million. The corporation was operating 137 projects with a capital investment of £133 million on Jan. 1, 1967. New investments approved in 1966 totaled £2.5 million.

Commonwealth Foreign Trade. Commonwealth exports in 1966 increased by 9% (equal to the percentage increase in world exports) to £13,824,000,000. Imports increased by 5% to £15,293,000,000, compared with a world rise of 10%. In the first quarter of 1967, exports totaled £3,510,000,000, a drop of £64,000,000 compared with the last quarter of 1966, while imports, at £4,004,000,000, increased by £186,000,000 over the previous quarter.

RICHARD E. WEBB
British Information Services, New York

COMMUNICATIONS. See POST OFFICE; SPACE EXPLORATION; TELEPHONE; TELEVISION AND RADIO.

COMMUNISM

高举毛泽东思想伟大红
旗・彻底埋葬

EASTFOTO

A mass demonstration in Peking attacking Soviet "revisionism" dramatizes the extent of the split between the two leading Communist countries. Rally was held on Feb. 12, 1967.

COMMUNISM

Fifty years after the Bolshevik Revolution in Russia, Communist governments ruled 14 countries that, taken together, possessed one third of the world's population and two fifths of its industry. But these countries were disunited in the anniversary year of 1967. They were pursuing individual policies and often feuding with each other. The Soviet bloc of nations was disintegrating, and the USSR could no longer control Communist parties outside its orbit. World Communist unity had been replaced by polycentrism—many varieties of communism.

Sino-Soviet Dispute. The most bitter quarrel in the Communist world continued to be the 10-year-old Sino-Soviet dispute. As usual, each side accused the other of betraying true communism. According to China, the USSR was collaborating with the United States to monopolize nuclear weapons and divide the world into spheres of influence. The Chinese claimed that the proposed Soviet-American pact to prevent proliferation of nuclear weapons would allow the United States to spend more funds on escalating the Vietnam War. They asserted that Russia was pressuring North Vietnam to make peace. The USSR was accused of abandoning the Arab nations during the 1967 Israeli-Arab conflict and of trying to isolate China from the other Communist parties in the world.

The USSR retorted that China was nationalistic and racist, that it was persecuting Turkic peoples in its Sinkiang province, that it was trying to control the world Communist movement, and that it was urging the Soviet people to overthrow Soviet leaders and put the USSR under the rule of Mao Tse-tung. Soviet leaders charged that China had attempted to force Russia to break diplomatic relations and that it used anti-Sovietism to divert the Chinese people's attention from China's economic troubles and foreign policy failures. China was also accused of hampering Soviet shipments of arms to North Vietnam, selling supplies to the U. S. armed forces fighting the Vietnam War, and, by quarreling with the USSR, enabling the United States to escalate the war.

Some of these mutual recriminations were probably true, others untrue, but all revealed how bitter the Sino-Soviet dispute had become.

During 1967, China antagonized several Communist countries other than the Soviet Union by harassing their embassies and diplomats in Peking. At various times Bulgaria, East Germany, Hungary, Mongolia, Poland, and Yugoslavia protested against such harassment. Czechoslovakia claimed that China was discouraging Hanoi from seeking a cease-fire in the Vietnamese War and asserted that China would enter that war if North Vietnam tried to make peace. Czechoslovakia stated that it would not aid China if China went to war. In February the Jap-

WIDE WORLD

RED GUARDS of China's cultural revolution place dunce caps on "antirevolutionaries" and invite public ridicule.

anese Communist party denounced China for interfering in its affairs. Thus China was becoming increasingly isolated from most other Communist countries and parties.

The vast majority of Communist organizations throughout the world supported Moscow against Peking. However, their support was more verbal than actual. When Moscow appealed for a world Communist conference, to be convened for the purpose of denouncing China, the Communist parties of Bulgaria, Czechoslovakia, Hungary, Poland, Britain, France, Spain, and Argentina were favorable. But the large parties of Cuba, Italy, Rumania, and Yugoslavia refused to participate, believing that an outright break with China would be too severe. Confronted with resistance from some of its own supporters, Moscow did not convene the world conference it desired.

As a partial substitute for a world conference, the USSR convened two meetings of European Communist parties in 1967; at Warsaw in February and at Karlovy Vary (Carlsbad), Czechoslovakia, in April. Both conferences were intended to establish European Communist unity, and both failed. Rumania, Yugoslavia, and several western European Communist parties refused to attend either meeting.

Eastern Europe. Besides boycotting European Communist conferences, Rumania in 1967 displayed its independence in other ways. In February, Rumania became the first Communist-bloc nation in eastern Europe to establish diplomatic relations with West Germany. When East Germany protested, Rumania replied that the East Germans had no right to interfere.

In April, Rumania and Israel signed a commercial treaty increasing annual mutual trade 100%. When the Israeli-Arab conflict erupted in June, the USSR and most of Communist eastern Europe condemned alleged Israeli aggression and broke diplomatic relations with Israel. But Rumanian-Israeli diplomatic relations and trade continued, and Rumania refused Moscow's plea to label Israel an aggressor. In July, Rumania did not attend a Budapest conference of the USSR, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Yugoslavia for planning economic aid to the Arab nations. Although it attended a similar meeting in Belgrade in September, Rumania blocked a Soviet proposal to extend USSR-eastern European joint aid to Arab countries.

Rumania remained in the Warsaw Pact alliance, and Rumanian troops participated in Soviet-Bulgarian joint military maneuvers in southern Bulgaria in August. However, Rumania stayed out of the new military alliances concluded in 1967 among east European Communist nations. These alliances were made by East Germany—with Poland and Czechoslovakia in March, Hungary in May, and Bulgaria in September. Bulgaria also signed an alliance with Poland in the spring. Thus Rumania was being encircled by the pacts of its European neighbors.

A divergence of policy in three Communist countries was revealed when Richard Nixon, the

KEYSTONE

YOUNG COMMUNISTS in Rome, protesting U. S. policies in Vietnam, carry portrait of North Vietnam's Ho Chi Minh.

former U. S. Vice President, visited eastern Europe and Russia in the spring. Poland refused to admit him. The USSR admitted Nixon, but would not let him contact high Soviet officials. Rumanian top officials welcomed him.

Albania remained the only eastern European Communist country taking China's side in the Sino-Soviet dispute. In imitation of the Chinese cultural revolution, Albania formed its own "Red Guards," who, however, were not allowed to behave as violently as China's. Albania complained that the USSR did not jam the Voice of America but did jam the Russian-language broadcasts of Albania's Radio Tiranë. In 1967 the so-called Communist party of Poland, consisting of several Polish Stalinist exiles, used Radio Tiranë to broadcast appeals to Poland's police to overthrow Władysław Gomułka, Poland's moderate leader.

Despite Soviet disapproval, Poland increased its trade with China in 1967, and Yugoslavia did the same with Albania.

Western Europe. In April the British Communist party displayed its independence of Moscow by issuing a statement on domestic policy supporting multiparty Parliaments, free elections, a peaceful, democratic revolution, and freedom of religion, art, music, literature, and scientific research. None of these freedoms existed in the USSR in 1967.

The French Communist party was more in harmony with Moscow. Its 18th party congress, in January, denounced China and criticized French President de Gaulle's opposition to disarmament, but it praised de Gaulle's friendship toward the USSR and his opposition to American involvement in the Vietnam War. In local elections during the year the party cooperated with French Socialists, even to the extent of withdrawing Communist candidates when a Socialist had a better chance of winning. This "united front" policy resulted in some Communist-Socialist election gains in local contests.

Asia and Oceania. China's attempt to gain control of the world Communist movement was badly weakened in 1967 by the Chinese cultural revolution, which caused internal chaos. The cultural revolution, which Moscow described as "counterrevolution," pitted the youthful paramilitary Red Guards against the entrenched bureaucracy of the Chinese government and party and the Young Communist League.

Party Chairman Mao Tse-tung hoped to enforce by violence a purer communism, promoting equality and preventing the rise of a Communist upper and middle class. But unlike any other Communist country, China previously had permitted multiple job-holding by local and regional officials. In a Chinese region the same person might simultaneously be governor, party chief, and military commander. Thus Mao had unintentionally created new, Communist warlords in place of the capitalist warlords he had overthrown. As 1967 ended, the new upper class had not been defeated, and the outcome of the cultural revolution was in doubt.

Meanwhile only the Communist parties of New Zealand and Malaysia remained wholeheartedly pro-Chinese in the Sino-Soviet dispute. The Australian Communist party was rent by internal dissension when part of its membership condemned anti-Semitism in the USSR. Shocked by Chinese border attacks on India during the year, the Indian Communist party lost influence and increasingly turned toward Moscow for guidance. On November 21 the Communist-dominated United Front government of West Bengal was dismissed by the central government and replaced by a regime handpicked by the Congress party.

UPI

ALEKSEI KOSYGIN, Soviet premier, decorates the grave of Karl Marx in London, where Marx lived from 1849 to 1883.

Outlawed and under severe governmental persecution, the once large Indonesian Communist party ceased to be an effective political force.

Latin America. In 1967 the Communists of Latin America were deeply divided over revolutionary tactics and strategy. In 1966 it appeared that Moscow had placed Latin American Communist parties under the control of Cuba, which ordered them to organize poor peasants for guerrilla warfare against the existing capitalist governments. By 1967, however, it was clear that Cuba exerted no such complete control. Some Latin American Communist parties operated mainly in the cities, trying to infiltrate student organizations, labor unions, and intellectual circles. Others obeyed Cuba by creating guerrilla bands in the countryside, particularly in Bolivia, Colombia, Guatemala, Peru, and Venezuela.

Almost all Latin American countries contained Communist splinter groups loyal to China and hostile to both Cuba and the USSR. Meanwhile the USSR was offering trade and technical aid to the very Latin American governments that Communists of all persuasions sought to overthrow. With Communist strategies in such confusion, Latin American Communists achieved little during 1967.

Dissension among the Communist parties of South and Central America was displayed publicly in August at the first conference of the Organization of Latin American Solidarity—a league of Communist parties formed in 1966 by Cuba with Moscow's blessings. Meeting in Havana, the delegates from various countries quickly quarreled. The Communist parties of Brazil and the Dominican Republic advocated guerrilla warfare against established governments, but the parties of Chile and Costa Rica considered such civil war premature and doomed to

crear dos, tres...
muchos vietnam
es la consigna

UPI

CUBAN COMMUNISTS gather in Havana under a sign calling for the creation of more Vietnam-type guerrilla actions.

failure. Delegates from Brazil and the Dominican Republic also openly criticized the USSR for helping Latin American capitalist dictatorships with Soviet trade and aid. (The USSR in 1967 had technical aid agreements with both Argentina and Brazil.) The delegates, however, agreed to a formal condemnation of the Venezuelan Communist party.

An honored guest at the conference was Stokely Carmichael, a militant crusader for Negro civil rights in the United States. In a well-publicized speech, obviously approved by Cuba, he urged American Negroes to wage guerrilla warfare in cities against American whites. Cuba was thus trying to form a united front of Latin American Communist parties and U. S. Negroes to oppose the U. S. government. But the majority of American Negroes appeared to be little interested in Carmichael's appeal.

Bolivia, plagued by Communist guerrilla warfare, outlawed its Communist party in April. By September the Bolivian government displayed photographs to prove that Ernesto (Che) Guevara, former minister of industry in Communist Cuba, was leading rural rebels in Bolivia. Guevara had left Cuba in 1965 after incurring Russian displeasure by demanding that rich Communist countries render free aid to poor Communist ones. On October 8, Guevara was captured by the Bolivian army and apparently was executed the next day. After several days of hesitation, Cuba acknowledged that he was dead.

North America. The Communist party of the United States in 1967 claimed a membership of 13,000. Gus Hall, general secretary, was its principal leader. The party tried to maintain neutrality in the Sino-Soviet dispute by approving both Chinese and Soviet policies. Thus the party could no longer be described as a mere instrument of Moscow. In internal affairs, it urged equality for Negroes and condemned alleged police brutality against them. In foreign affairs, it opposed U. S. participation in the Vietnam War, supported Cuba against the United States, and favored the Arab countries in the Israeli-Arab conflict. Despite attempts to display party unity, the U. S. Communist party was badly divided in 1967 over the question of anti-Semitism in the USSR.

The party won a long legal battle in March when the U. S. Court of Appeals in Washington, D. C., overruled a 1965 federal court ruling that the party had violated the Internal Security Act of 1950 (McCarran Act) by refusing to disclose its membership list and finances to the government. The court held that requiring the party to list its members would expose them to prosecution under the Smith Act, which makes it a crime to belong to an organization advocating violent overthrow of the U. S. government. A month later, the Department of Justice decided not to appeal the verdict to the Supreme Court. Thus the McCarran Act was null and void.

WORLD COMMUNIST MEMBERSHIP, 1967

Country	Membership
Africa	
Algeria*	1,000
Malagasy Republic	100
Morocco*	500
Nigeria*	1,000
Sudan*	7,500
Tunisia*	250
Asia	
Australia	5,000
Burma*	5,000
Cambodia	100
Ceylon	1,900
China, Communist	21,000,000
India	125,000
Indonesia*	150,000
Iran*	1,000
Iraq*	2,000
Israel	2,000
Japan	250,000
Jordan*	400
Korea, North	1,600,000
Lebanon*	6,000
Malaysia*	3,000
Mongolia	48,600
Nepal*	7,500
New Zealand	400
Pakistan*	3,300
Philippines*	1,800
Singapore*	200
Syria*	3,000
Thailand*	1,600
Turkey*	2,000
Vietnam, North	760,000
Vietnam, South*	40,000
Europe	
Albania	66,300
Austria	35,000
Belgium	13,500
Bulgaria	611,200
Cyprus	10,000
Czechoslovakia	1,698,000
Denmark	6,000
Finland	49,000
France	290,000
Germany, East	1,611,000
Germany, West*	13,000
Greece*	27,000
Hungary	590,000
Iceland	1,000
Ireland	125
Italy	1,467,000
Luxembourg	500
Netherlands	12,000
Norway	2,500
Poland	1,895,000
Portugal*	2,000
Rumania	1,518,000
Spain*	5,000
Sweden	29,000
Switzerland	4,000
United Kingdom	33,200
Yugoslavia	1,046,000
North America	
Canada	3,500
Costa Rica*	450
Cuba	60,000
Dominican Republic*	1,300
El Salvador*	200
Guadeloupe	1,000
Guatemala*	1,000
Honduras*	1,300
Martinique	700
Mexico	5,300
Nicaragua*	200
Panama*	500
United States	13,000
South America	
Argentina*	60,000
Bolivia*	5,500
Brazil*	20,000
Chile	30,000
Colombia	10,000
Ecuador*	1,500
Paraguay*	5,000
Peru*	5,000
Uruguay	15,000
Venezuela*	10,000
USSR	
USSR	12,471,000

* Countries where the Communist party is illegal. (Source: U.S. State Department.)

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CONGO, Democratic Republic of

President Joseph Mobutu continued efforts in 1967 to centralize power in his hands and to make his country economically independent. The major political event of the year was the approval of a new constitution establishing a strong presidential system. In economic affairs, the government set up a new firm to administer the expropriated assets of the Belgian-controlled Union Minière. It also introduced a new currency system. Despite improved political and economic conditions, however, the Congo was again forced to deal with rebellion by mercenary troops.

Political Changes. A new constitution replacing that of 1964 was approved by 90% of the voters in a June plebiscite. It vested executive power in a president and provided for a 7-year term of office. The post of premier was abolished, and provision was made for a unicameral parliament of 300 members. The old parliament was dissolved in June, and President Mobutu will rule by decree until the election of a new parliament in 1968. No presidential election is to be held before 1970.

UPI

COL. JEAN SCHRAMME (center), Belgian-born leader of the mercenaries occupying Bukavu in the eastern Congo.

In April the president created a nationwide political party, the Mouvement Populaire de la Révolution (MPR). It was generally admitted that the opposition party provided for in the new constitution will have no real significance.

As a further step toward the consolidation of his power, Mobutu in December 1966 reduced the number of provinces from 12 to 8. He named all the provincial governors and converted the provincial assemblies into purely advisory bodies.

Economic Changes. In 1966 the government demanded that concessions granted before independence in 1960 be renegotiated and that foreign companies exploiting the country's resources move their administrative headquarters to the Congo. The Belgian Union Minière du Haut-Katanga, the most powerful and important of the foreign companies, said that such a transfer was impossible. Since efforts at compromise failed, the Congolese government took over the company's assets, and on Jan. 1, 1967, formed a new company, Société Générale Congolaise des Minerais (GECOMIN), to administer its assets. The government held 60% of the shares, and the rest were to be held by private subscribers. After weeks of heated argument, the Belgians and GECOMIN reached an accord on Feb. 17, 1967. Belgians were to supervise the facilities and personnel in Congo operations and to manage marketing abroad. The arrangement is for five years, with provision for the legal settlement of financial claims.

As part of a series of monetary reforms intended to stimulate trade and investment, the government devalued the currency and introduced a new currency system on June 24. The Congolese franc was replaced by a new national currency called the zaire. One zaire is worth 1,000 Congolese francs (0.50 zaire equals U. S.$1).

Mercenary Revolt. A rebellion broke out in the Congo on July 5. Led by two former associates of ex-Premier Moïse Tshombe (Col. Bob Denard, a Frenchman, and Maj. Jean Schramme, a Belgian), some 150 white mercenaries and over 900 former Katangese gendarmes seized the cities of Bukavu and Kisangani. Some observers saw a connection between this rebellion and an effort to rescue Tshombe in case of his extradition to the Congo. Actually, it seems that the uprising was a result of Mobutu's decision to rid his country of all white mercenaries. Denard and Schramme were to be disarmed and demobilized as other commandos had been. But they feared that their disarmament would be followed by trial and execution, and they therefore resisted the order.

The rebels were quickly driven out of the two cities they had taken. On July 10 the United States sent three transport planes to the Congo to provide logistical support for the Mobutu government. In early August, however, Schramme captured Bukavu, which he held for nearly three months. The city was retaken by government forces on November 4. The weakness of the Congolese Army enabled Schramme and his followers to resist capture. Mobutu was also hampered by international demands that the white mercenaries be repatriated and that the Katangese be given refuge in Zambia.

While the International Red Cross was arranging for the evacuation of the rebels, the Congolese forces intensified their efforts to take Bukavu. In this critical situation more mercenaries invaded Katanga from Angola. It was suggested that this invasion was a diversion to enable the rebels in Bukavu to reach neutral Rwanda. Mobutu is seeking the extradition of the white mercenaries from Rwanda to the Congo for trial. The Katangese gendarmes returned to the Congo, where their treatment is unknown.

Tshombe Affair. Although in European exile, Tshombe remained a source of great anxiety to Pres-

DEMOCRATIC REPUBLIC OF CONGO • Information Highlights

ASIA
AFRICA
SOUTH AMERICA

Area: 905,562 square miles (2,345,409 sq km).
African Population: 15,986,000 (July 1, 1966, est.).
Chief Cities (1964 est.): Kinshasa, the capital, 1,000,000; Lubumbashi, 200,000; Kisangani, 100,000.
Government: *President*—Joseph D. Mobutu (took office Nov. 25, 1965).
Religious Faiths: Tribal religions, 50% of population; Roman Catholic, 35%; Protestant, 7%; other, 8%.
Education: *Literacy rate* (1955), 15% of population aged 15 and over. *Total school enrollment* (1964)—1,684,252 (primary, 1,592,225; secondary, 52,309; teacher-training, 19,248; technical, 17,334; higher, 3,136).
Finance (1967 budget est.): *Revenues*, $399,000,000; *expenditures*, $399,000,000; *monetary unit*, zaire (0.50 zaire equals U.S.$1).
Gross National Product (1966): $1,200,000,000.
National Income (1964): $929,000,000; average annual income per person, $61.
Cost of Living Index (1966): 155 (1963=100).
Manufacturing: Beer; sugar.
Crops (metric tons, 1966–67 crop year): Peanuts (1965–66), 113,375; coffee, 60,000; natural rubber, 25,900.
Minerals (metric tons, 1965): Cobalt, 8,388 (ranks 1st among world producers); diamonds, 26,596,000 carats (world rank, 1st); zinc (1966), 116,400; bituminous coal, 114,000.
Foreign Trade (1965): *Exports*, $330,000,000 (chief exports, 1965: copper, $143,600,000; diamonds, $19,435,000; coffee, $14,289,000; natural rubber, $7,573,000); *imports*, $320,000,000 (chief imports, 1965: fish, $10,611,000; motor vehicles, $8,590,000). *Chief trading partners:* Belgium and Luxembourg.
Transportation: *Roads* (1964), 90,430 miles (145,529 km); *motor vehicles* (1965), 55,801 (automobiles, 36,898); *railways* (1965), 3,108 miles (5,002 km).
Communications: *Telephones* (1966): 20,000; *radios* (1964), 200,000; *newspapers* (1965), 8.

ident Mobutu. There were rumors that Tshombe was hiring mercenaries for an early return to the Congo to overthrow Mobutu or to make Katanga independent. To end this threat Mobutu appointed a 3-man military tribunal that tried Tshombe in absentia and on March 13 condemned him to death for treason, sedition, and incitement of rebellion.

On June 30, Tshombe was kidnapped when the private plane in which he was flying was hijacked and forced to land in Algeria. There is no evidence for implicating Algeria in Tshombe's capture, although he was kept in prison there. Mobutu has sought his rival's extradition to the Congo for execution. However, Algerian President Boumedienne did not approve the extradition, to which opposition was expressed by many persons throughout the world.

Foreign Relations. Mobutu and his often undisciplined soldiers blamed Belgians for the troubles in the Congo and charged that Union Minière was engaged in the recovery of lost properties. A number of the Belgians living in the Congo lost their lives, some through brutal treatment by Congolese soldiers. There was pressure on the Belgian government to sever all relations with the Congo and to cease all aid, or at least not to permit the return of teachers and technicians until guarantees for their safety were given by the Congolese government. Some Belgians, however, returned to their work in the Congo, satisfied with the assurances that Mobutu has given.

President Mobutu resumed relations with several African states that had broken with the Congo when Tshombe headed the government. The annual summit conference of the Organization of African Unity was held in Kinshasa from September 11 to 14. The conference was the successful culmination of Mobutu's bid for African recognition of his regime.

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CONGO, Republic of the (Brazzaville)

Developments in the Congo (Brazzaville) in 1967 were inevitably influenced by the memory of the abortive coup led by dissident segments of the armed forces in June 1966. Political purges and trials continued into 1967, as did efforts by President Alphonse Massamba-Débat and Premier Ambroise Noumazalay to juggle contending forces and mollify powerful parties in the armed services. The trials, propagandizing, and efforts at mollification taken together gave the appearance of political schizophrenia, and this condition extended into the realm of foreign relations.

Foreign Affairs. On the one hand, Massamba-Débat asserted that there were strong feelings of "popular unity" with France; on the other hand, he authorized his minister of interior to declare the new youth wing of the French-dominated Organisation Commune Africaine et Malgache an "instrument of intellectual neo-colonialism." The government also was critical of French activities in the Somaliland referendum in March 1967. Later in the year, however, Massamba-Débat opposed a motion calling for nationalization of foreign-owned or -dominated businesses. Anti-Western "radicals" of the youth branch of the country's single political party were arrested.

In other areas of diplomacy, relations with Nigeria, Ghana, and the Democratic Republic of Congo were normalized in February 1967.

— REPUBLIC OF THE CONGO • Information Highlights —

ASIA
AFRICA

Area: 132,046 square miles (342,000 sq km).
Population: 850,000 (1966 est.).
Chief City (1962 est.): Brazzaville, the capital, 135,368.
Government: *President*—Alphonse Massamba-Débat (took office Dec. 19, 1963); *Premier*—Ambroise Noumazalay (took office May 7, 1966). *Parliament*—National Assembly, 55 members (all belonging to the National Revolutionary Movement).
Religious Faiths: Tribal religions, 46% of population; Roman Catholic, 32%; Protestant, 16%; other, 6%.
Education: *Literacy rate* (1961), 20% of population. *Total school enrollment* (1964)—186,087 (primary, 171,528; secondary, 10,973; teacher-training, 274; technical, 2,641; higher, 671).
Finance (1966 est.): *Revenues,* $33,400,000; *expenditures,* $33,400,000; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1966): $142,000,000.
Cost of Living Index (1966): 153 (1958=100).
Manufacturing (metric tons, 1965): Sugar, 30,000; beer, 4,100; lumber, 43,000 cubic meters.
Crops (metric tons): Cassava (1964–65), 700,000; peanuts (1965–66), 11,791; cocoa beans (1966–67), 900.
Minerals (metric tons, 1965): Crude petroleum (1966), 62,040; lead, 2,812; tin, 49; gold, 3,692 troy ounces.
Foreign Trade (1966): *Exports,* $43,133,000 (chief exports: wood, $22,316,000; diamonds, $15,147,000); *imports,* $69,215,000 (chief imports, 1965: nonelectrical machinery, $9,436,500; road motor vehicles, $5,751,000; iron and steel, $3,292,650). *Chief trading partners* (1965): France (took 9% of exports, supplied 61% of imports); Netherlands (took 26% of exports, supplied 3% of imports); West Germany (took 21% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 6,737 miles (10,839 km); *motor vehicles* (1965), 11,500 (automobiles, 6,300); *railways* (1963), 321 miles (517 km); *principal airport,* Brazzaville.
Communications: *Telephones* (1966): 8,172; *television sets* (1965), 500; *newspapers* (1963), 1 (daily circulation, 400).

Economy. The Congo continued to be plagued by balance of payments problems, but aid was forthcoming. New grants from France in 1967 will finance mineral prospecting in the north and a fishing survey off the coast, and a $3 million grant from the UN Special Fund will underwrite a 5-year prospecting venture in the southwest. The World Bank provided a $3 million loan for financing the potash industry. Other grants and trade agreements arranged during the year with France, the European Economic Community, the Soviet Union, and Communist China will go toward improving transportation, agriculture, and industry.

EDOUARD BUSTIN
Boston University

CONGRESS

The United States Congress is made up of the Senate (100 members) and the House of Representatives (435 members). Senators serve for 6-year terms, each third of the Senate being elected at 2-year intervals. Representatives serve 2-year terms. The annual salary of a senator or a representative is $30,000. Democrats won a House seat in a special Rhode Island election in 1967 but lost a seat when Rep. Adam Clayton Powell of New York was denied House membership in March. For a list of congressional members, see pages 197–198. (For 1967 congressional actions, see UNITED STATES.)

NINETIETH CONGRESS OF THE UNITED STATES

(Second Session)

(Membership as of Jan. 15, 1968)

SENATE

(Democrats, 64; Republicans, 36; total, 100)

President: Vice President Hubert H. Humphrey, Minn.
Secretary: Francis R. Valeo

Majority Leader: Mike Mansfield, Mont.
Minority Leader: Everett McKinley Dirksen, Ill.

Letters after senators' names refer to party affiliation—D for Democrat, R for Republican. Single asterisk (*) denotes term expiring in January, 1969; double asterisk (**), term expiring in January, 1971; triple asterisk (***), term expiring in January 1973.

Alabama
*Lister Hill, D
***John Sparkman, D

Alaska
***E.L. Bartlett, D
*Ernest Gruening, D

Arizona
*Carl Hayden, D
**Paul J. Fannin, R

Arkansas
***John L. McClellan, D
*J.W. Fulbright, D

California
*Thomas H. Kuchel, R
**George Murphy, R

Colorado
***Gordon Allott, R
*Peter H. Dominick, R

Connecticut
**Thomas J. Dodd, D
*Abraham A. Ribicoff, D

Delaware
**John J. Williams, R
***J. Caleb Boggs, R

Florida
**Spessard L. Holland, D
*George A. Smathers, D

Georgia
***Richard B. Russell, D
*Herman E. Talmadge, D

Hawaii
**Hiram L. Fong, R
*Daniel K. Inouye, D

Idaho
*Frank Church, D
***Len B. Jordan, R

Illinois
*Everett McK. Dirksen, R
***Charles H. Percy, R

Indiana
**Vance Hartke, D
*Birch E. Bayh, D

Iowa
*Bourke B. Hickenlooper, R
***Jack Miller, R

Kansas
*Frank Carlson, R
***James B. Pearson, R

Kentucky
***John S. Cooper, R
*Thruston B. Morton, R

Louisiana
***Allen J. Ellender, D
*Russell B. Long, D

Maine
***Margaret Chase Smith, R
**Edmund S. Muskie, D

Maryland
*Daniel B. Brewster, D
**Joseph D. Tydings, D

Massachusetts
***Edward W. Brooke, R
**Edward M. Kennedy, D

Michigan
***Robert P. Griffin, R
**Philip A. Hart, D

Minnesota
**Eugene J. McCarthy, D
***Walter F. Mondale, D

Mississippi
***James O. Eastland, D
**John Stennis, D

Missouri
**Stuart Symington, D
*Edward V. Long, D

Montana
**Mike Mansfield, D
***Lee Metcalf, D

Nebraska
**Roman L. Hruska, R
***Carl T. Curtis, R

Nevada
*Alan Bible, D
**Howard W. Cannon, D

New Hampshire
*Norris Cotton, R
***Thomas J. McIntyre, D

New Jersey
***Clifford P. Case, R
**H.A. Williams, Jr., D

New Mexico
***Clinton P. Anderson, D
**Joseph M. Montoya, D

New York
*Jacob K. Javits, R
**Robert F. Kennedy, D

North Carolina
*Sam J. Ervin, Jr., D
***B. Everett Jordan, D

North Dakota
*Milton R. Young, R
**Quentin Burdick, D

Ohio
*Frank J. Lausche, D
**Stephen M. Young, D

Oklahoma
*A.S. Mike Monroney, D
***Fred R. Harris, D

Oregon
*Wayne Morse, D
***Mark Hatfield, R

Pennsylvania
*Joseph S. Clark, Jr., D
**Hugh Scott, R

Rhode Island
**John O. Pastore, D
***Claiborne Pell, D

South Carolina
***Strom Thurmond, R
*Ernest F. Hollings, D

South Dakota
***Karl E. Mundt, R
*George S. McGovern, D

Tennessee
**Albert Gore, D
***Howard H. Baker, Jr., R

Texas
**Ralph W. Yarborough, D
***John G. Tower, R

Utah
*Wallace F. Bennett, R
**Frank E. Moss, D

Vermont
*George D. Aiken, R
**Winston L. Prouty, R

Virginia
**Harry F. Byrd, Jr., D
***William B. Spong, Jr., D

Washington
*Warren G. Magnuson, D
**Henry M. Jackson, D

West Virginia
***Jennings Randolph, D
**Robert C. Byrd, D

Wisconsin
**William Proxmire, D
*Gaylord Nelson, D

Wyoming
**Gale W. McGee, D
***Clifford P. Hansen, R

HOUSE OF REPRESENTATIVES

(Democrats, 247; Republicans, 187; vacancies, 1; total, 435)

Speaker: John W. McCormack, Mass.
Clerk: W. Pat Jennings

Majority Leader: Carl Albert, Okla.
Minority Leader: Gerald R. Ford, Mich.

Letters after representatives' names refer to party affiliation—D for Democrat, R for Republican. The abbreviation "At-L." in place of congressional district number means "representative at large." Asterisk (*) before member's name indicates reelection in 1966 (served in 89th Congress); double asterisk (**) before name indicates election in 1967.

Alabama
1. *Jack Edwards, R
2. *W.L. Dickinson, R
3. *George Andrews, D
4. Bill Nichols, D
5. *A.I. Selden, Jr., D
6. John Buchanan, R
7. Tom Bevill, D
8. *R.E. Jones, Jr., D

Alaska
At-L. H.W. Pollock, R

Arizona
1. *J.J. Rhodes, R
2. *M.K. Udall, D
3. Sam Steiger, R

Arkansas
1. *E.C. Gathings, D
2. *W.D. Mills, D
3. J.P. Hammerschmidt, R
4. David Pryor, D

California
1. *D.H. Clausen, R
2. *H.T. Johnson, D
3. *J.E. Moss, D
4. *R.L. Leggett, D
5. Phillip Burton, D
6. *W.S. Mailliard, R
7. Jeffery Cohelan, D
8. *G.P. Miller, D
9. *Don Edwards, D
10. *C.S. Gubser, R
11. **P.N. McCloskey, R
12. *B.L. Talcott, R
13. *C.M. Teague, R
14. *J.R. Waldie, D
15. *J.J. McFall, D
16. *B.F. Sisk, D
17. *C.R. King, D
18. R.B. Mathias, R
19. *Chet Holifield, D
20. *H.A. Smith, R
21. *A.F. Hawkins, D
22. *J.C. Corman, D
23. *Del Clawson, R
24. *G.P. Lipscomb, R
25. C.E. Wiggins, R
26. *T.M. Rees, D
27. *Ed Reinecke, R
28. *Alphonzo Bell, R
29. *G.E. Brown, Jr., D
30. *E.R. Roybal, D
31. *C.H. Wilson, D
32. *Craig Hosmer, R
33. J.L. Pettis, R
34. *R.T. Hanna, D
35. *J.B. Utt, R
36. *Bob Wilson, R
37. *L. Van Deerlin, D
38. *J.V. Tunney, D

Colorado
1. *B.G. Rogers, D
2. D.G. Brotzman, R
3. *F.E. Evans, D
4. *W.N. Aspinall, D

Connecticut
1. *E.Q. Daddario, D
2. *W.L. St. Onge, D
3. *R.N. Giaimo, D
4. *D.J. Irwin, D
5. *J.S. Monagan, D
6. T.J. Meskill, R

Delaware
At-L. W.V. Roth, Jr., R

Florida
1. *R.L.F. Sikes, D
2. *Don Fuqua, D
3. *C.E. Bennett, D
4. *A.S. Herlong, Jr., D
5. *E.J. Gurney, R
6. *Sam Gibbons, D
7. *J.A. Haley, D
8. *W.C. Cramer, R
9. *P.G. Rogers, D
10. J.H. Burke, R
11. *Claude Pepper, D
12. *D.B. Fascell, D

Georgia
1. *G.E. Hagan, D
2. *Maston O'Neal, D
3. Jack Brinkley, D
4. B.B. Blackburn, R
5. Fletcher Thompson, R
6. *J.J. Flynt, Jr., D
7. *J.W. Davis, D
8. W.S. Stuckey, D
9. *P.M. Landrum, D
10. *R.G. Stephens, Jr., D

Hawaii
At-L. *S.M. Matsunaga, D
At-L. *Patsy T. Mink, D

Idaho
1. J.A. McClure, R
2. *G.V. Hansen, R

Illinois
1. *W.L. Dawson, D
2. *Barratt O'Hara, D
3. *W.T. Murphy, D
4. *E.J. Derwinski, R
5. *J.C. Kluczynski, D
6. *D.J. Ronan, D
7. *Frank Annunzio, D
8. *D. Rostenkowski, D
9. *S.R. Yates, D
10. *H.R. Collier, R
11. *R.C. Pucinski, D
12. *Robert McClory, R
13. *Donald Rumsfeld, R
14. *J.N. Erlenborn, R
15. *Charlotte T. Reid, R
16. *J.B. Anderson, R
17. *L.C. Arends, R
18. *R.H. Michel, R
19. Tom Railsback, R
20. *Paul Findley, R
21. *K.J. Gray, D
22. *W.L. Springer, R
23. *G.E. Shipley, D
24. *Melvin Price, D

Indiana
1. *R.J. Madden, D
2. *C.A. Halleck, R
3. *John Brademas, D
4. *E.R. Adair, R
5. *J.E. Roush, D
6. *W.G. Bray, R
7. J.T. Myers, R
8. R.H. Zion, R
9. *L.H. Hamilton, D
10. *R.L. Roudebush, R
11. *Andrew Jacobs, Jr., D

Iowa
1. Fred Schwengel, R
2. *J.C. Culver, D
3. *H.R. Gross, R
4. John Kyl, R
5. *Neal Smith, D
6. Wiley Mayne, R
7. W.J. Scherle, R

Kansas
1. *Robert Dole, R
2. *C.L. Mize, R
3. Larry Winn, Jr., R
4. *G.E. Shriver, R
5. *Joe Skubitz, R

Kentucky
1. *F.A. Stubblefield, D
2. *W.H. Natcher, D
3. W.O. Cowger, R
4. M.G. Snyder, R
5. *T.L. Carter, R
6. *J.C. Watts, D
7. *C.D. Perkins, D

Louisiana
1. *F.E. Hébert, D
2. *Hale Boggs, D
3. *E.E. Willis, D
4. *J.D. Waggonner, Jr., D
5. *O.E. Passman, D
6. J.R. Rarick, D
7. *E.W. Edwards, D
8. *S.O. Long, D

Maine
1. P.N. Kyros, D
2. *W.D. Hathaway, D

Maryland
1. *R.C.B. Morton, R
2. *C.D. Long, D
3. *E.A. Garmatz, D
4. *G.H. Fallon, D
5. *H.G. Machen, D
6. *C. McC. Mathias, Jr., R
7. *S.N. Friedel, D
8. Gilbert Gude, R

Massachusetts
1. *S.O. Conte, R
2. *E.P. Boland, D
3. P.J. Philbin, D
4. *H.D. Donohue, D
5. *F.B. Morse, R
6. *W.H. Bates, R
7. *T.H. Macdonald, D
8. *T.P. O'Neill, Jr., D
9. *J.W. McCormack, D
10. Margaret M. Heckler, R
11. *J.A. Burke, D
12. *Hastings Keith, R

Michigan
1. *John Conyers, Jr., D
2. M.L. Esch, R
3. Garry Brown, R
4. *Edward Hutchinson, R
5. *G.R. Ford, R
6. *C.E. Chamberlain, R
7. D.W. Riegle, Jr., R
8. *James Harvey, R
9. *G. Vander Jagt, R
10. *E.A. Cederberg, R
11. P.E. Ruppe, R
12. *J.G. O'Hara, D
13. *C.C. Diggs, Jr., D
14. *L.N. Nedzi, D
15. *W.D. Ford, D
16. *J.D. Dingell, D
17. *Martha W. Griffiths, D
18. *W.S. Broomfield, R
19. J.H. McDonald, R

Minnesota
1. *A.H. Quie, R
2. *Ancher Nelsen, R
3. *Clark MacGregor, R
4. *J.E. Karth, D
5. *D.M. Fraser, D
6. J.M. Zwach, R
7. *Odin Langen, R
8. *J.A. Blatnik, D

Mississippi
1. *T.G. Abernethy, D
2. *J.L. Whitten, D
3. *J.B. Williams, D
4. G.V. Montgomery, D
5. *W.M. Colmer, D

Missouri
1. *F.M. Karsten, D
2. *T.B. Curtis, R
3. *Leonor K. Sullivan, D
4. *W.J. Randall, D
5. *Richard J. Bolling, D
6. *W.R. Hull, Jr., D
7. *D.G. Hall, R
8. *R.H. Ichord, D
9. *W.L. Hungate, D
10. *P.C. Jones, D

Montana
1. *Arnold Olsen, D
2. *J.F. Battin, R

Nebraska
1. R.V. Denney, R
2. *Glenn Cunningham, R
3. *Dave Martin, R

Nevada
At-L. *W.S. Baring, D

New Hampshire
1. L.C. Wyman, R
2. *J.C. Cleveland, R

New Jersey
1. J.E. Hunt, R
2. C.W. Sandman, Jr., R
3. *J.J. Howard, D
4. *Frank Thompson, Jr., D
5. *P.H.B. Frelinghuysen, R
6. *W.T. Cahill, R
7. *W.B. Widnall, R
8. *C.S. Joelson, D
9. *Henry Helstoski, D
10. *P.W. Rodino, Jr., D
11. *J.G. Minish, D
12. *Florence P. Dwyer, R
13. *C.E. Gallagher, D
14. *D.V. Daniels, D
15. *E.J. Patten, D

New Mexico
At-L. *T.G. Morris, D
At-L. *E.S.J. Walker, D

New York
1. *O.G. Pike, D
2. *J.R. Grover, Jr., R
3. *L.L. Wolff, D
4. *J.W. Wydler, R
5. *Herbert Tenzer, D
6. *Seymour Halpern, R
7. *J.P. Addabbo, D
8. *B.S. Rosenthal, D
9. *J.J. Delaney, D
10. *Emanuel Celler, D
11. F.J. Brasco, D
12. *Edna F. Kelly, D
13. *A.J. Multer, D
14. *J.J. Rooney, D
15. *H.L. Carey, D
16. *J.M. Murphy, D
17. *T.R. Kupferman, R
18. ......
19. *Leonard Farbstein, D
20. *W.F. Ryan, D
21. *J.H. Scheuer, D
22. *J.H. Gilbert, D
23. *J.B. Bingham, D
24. *P.A. Fino, R
25. *R.L. Ottinger, D
26. *O.R. Reid, R
27. *J.G. Dow, D
28. *J.Y. Resnick, D
29. D.E. Button, R
30. *C.J. King, R
31. *R.C. McEwen, R
32. *Alexander Pirnie, R
33. *H.W. Robison, R
34. *J.M. Hanley, D
35. *S.S. Stratton, D
36. *F.J. Horton, R
37. *B.B. Conable, Jr., R
38. *C.E. Goodell, R
39. *R.D. McCarthy, D
40. *H.P. Smith, III, R
41. *T.J. Dulski, D

North Carolina
1. *W.B. Jones, D
2. *L.H. Fountain, D
3. *D.N. Henderson, D
4. J.C. Gardner, R
5. Nick Galifianakis, D
6. *H.R. Kornegay, D
7. *Alton Lennon, D
8. *C.R. Jonas, R
9. *J.T. Broyhill, R
10. *B.L. Whitener, D
11. *R.A. Taylor, D

North Dakota
1. *Mark Andrews, R
2. T.S. Kleppe, R

Ohio
1. Robert Taft, Jr., R
2. *D.D. Clancy, R
3. C.W. Whalen, Jr., R
4. *W.M. McCulloch, R
5. *D.L. Latta, R
6. *W.H. Harsha, R
7. *C.J. Brown, Jr., R
8. *J.E. Betts, R
9. *T.L. Ashley, D
10. C.E. Miller, R
11. *J.W. Stanton, R
12. *S.L. Devine, R
13. *C.A. Mosher, R
14. *W.H. Ayres, R
15. C.P. Wylie, R
16. *F.T. Bow, R
17. *J.M. Ashbrook, R
18. *W.L. Hays, D
19. *M.J. Kirwan, D
20. *M.A. Feighan, D
21. *C.A. Vanik, D
22. *Frances P. Bolton, R
23. *W.E. Minshall, R
24. D.E. Lukens, R

Oklahoma
1. *Page Belcher, R
2. *Ed Edmondson, D
3. *Carl Albert, D
4. *Tom Steed, D
5. *John Jarman, D
6. J.V. Smith, R

Oregon
1. *Wendell Wyatt, R
2. *Al Ullman, D
3. *Edith Green, D
4. J.R. Dellenback, R

Pennsylvania
1. *W.A. Barrett, D
2. *R.N.C. Nix, D
3. *J.A. Byrne, D
4. Joshua Eilberg, D
5. *W.J. Green, D
6. *G.M. Rhodes, D
7. L.G. Williams, R
8. E.G. Biester, Jr., R
9. *G.R. Watkins, R
10. *J.M. McDade, R
11. *D.J. Flood, D
12. *J.I. Whalley, R
13. *R.S. Schweiker, R
14. *W.S. Moorhead, D
15. *F.B. Rooney, D
16. E.D. Eshleman, R
17. *H.T. Schneebeli, R
18. *R.J. Corbett, R
19. G.A. Goodling, R
20. *E.J. Holland, D
21. *J.H. Dent, D
22. *J.P. Saylor, R
23. *A.W. Johnson, R
24. *J.P. Vigorito, D
25. *F.M. Clark, D
26. *T.E. Morgan, D
27. *J.G. Fulton, R

Rhode Island
1. *F.J. St. Germain, D
2. R.O. Tiernan, D

South Carolina
1. *L.M. Rivers, D
2. *A.W. Watson, R
3. *W.J.B. Dorn, D
4. *R.T. Ashmore, D
5. *T.S. Gettys, D
6. *J.L. McMillan, D

South Dakota
1. *Ben Reifel, R
2. *E.Y. Berry, R

Tennessee
1. *J.H. Quillen, R
2. *J.J. Duncan, R
3. *W.E. Brock, R
4. *J.L. Evins, D
5. *Richard Fulton, D
6. *W.R. Anderson, D
7. Ray Blanton, D
8. *R.A. Everett, D
9. Dan Kuykendall, R

Texas
1. *Wright Patman, D
2. *John Dowdy, D
3. *Joe Pool, D
4. *Ray Roberts, D
5. *Earle Cabell, D
6. *O.E. Teague
7. George Bush, R
8. Bob Eckhardt, D
9. *Jack Brooks, D
10. *J.J. Pickle, D
11. *W.R. Poage, D
12. *Jim Wright, D
13. *Graham Purcell, D
14. *John Young, D
15. *E. de la Garza, D
16. *Richard White, D
17. *Omar Burleson, D
18. Robert Price, R
19. *George Mahon, D
20. *H.B. Gonzalez, D
21. *O.C. Fisher, D
22. *Bob Casey, D
23. Abraham Kazen, Jr., D

Utah
1. *L.J. Burton, R
2. S.P. Lloyd, R

Vermont
At-L. *R.T. Stafford, R

Virginia
1. *T.N. Downing, D
2. *Porter Hardy, Jr., D
3. *D.E. Satterfield, III, D
4. *W.M. Abbitt, D
5. *W.M. Tuck, D
6. *R.H. Poff, R
7. *J.O. Marsh, Jr., D
8. W.L. Scott, R
9. W.C. Wampler, R
10. *J.T. Broyhill, R

Washington
1. *T.M. Pelly, R
2. *Lloyd Meeds, D
3. *Julia B. Hansen, D
4. *Catherine May, R
5. *T.S. Foley, D
6. *F.V. Hicks, D
7. *Brock Adams, D

West Virginia
1. *A.A. Moore, Jr., R
2. *H.O. Staggers, D
3. *J.M. Slack, Jr., D
4. *Ken Hechler, D
5. *James Kee, D

Wisconsin
1. H.C. Schadeberg, R
2. *R.W. Kastenmeier, D
3. *V.W. Thomson, R
4. *C.J. Zablocki, D
5. *H.S. Reuss, D
6. W.A. Steiger, R
7. *M.R. Laird, R
8. *J.W. Byrnes, R
9. *G.R. Davis, R
10. *A.E. O'Konski, R

Wyoming
At-L. W.H. Harrison, R

Puerto Rico
Resident Commissioner
*Santiago Polanco-Abreu

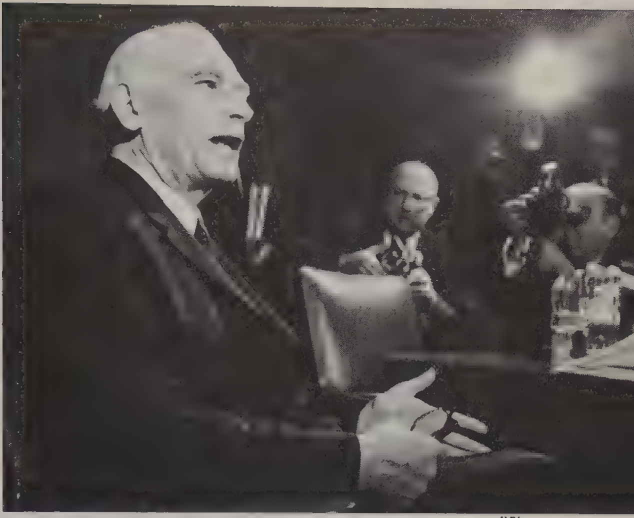
CONNECTICUT

The 1967 session of the General Assembly was notable for broad legislative accomplishments as well as for the fact that it was the first regular session since reapportionment and since adoption of a new state constitution in 1965. Reapportionment brought an end to rural domination of the Assembly.

No definite trends emerged from the municipal elections held on November 7. The count of political parties in power remained the same as before, with Republicans in control of 20 municipalities, and Democrats of 13.

Municipal Elections. In winning the mayoralty in Hartford, Miss Antonina P. Uccello became the first Republican to win that office in 20 years and the first woman ever elected mayor of Hartford. At the same time, Democrats gained a seat on Hartford's city council, giving them six seats to the Republicans' three. Republicans retained the mayoralty in normally Democratic Waterbury and New Britain. For the Democrats, the most conspicuous victory was that of Hugh C. Curran, who was reelected mayor of Bridgeport by a vote of 3 to 1. Richard C. Lee, a Democrat, won his eighth term as mayor of New Haven.

Legislation. Democratic Gov. John N. Dempsey, who won a second 4-year term in 1966, had little trouble in carrying out his campaign promise to continue and even expand state services with no increase in taxation. A spending and borrowing program of $1.8 billion was enacted for the 2-year fiscal period ending in June 1969. This included bond issues of $150 million for a cleanup of polluted waters, $30 million for urban renewal, and $18 million for bonuses to veterans of the Vietnam War. Increases were made in the minimum wage (to $1.60 an hour by July 1968), unemployment compensation and workmen's compensation, and state aid for education and for public libraries.


UPI

SEN. THOMAS J. DODD of Connecticut, here testifying before the Senate Ethics Committee, was later censured.

CONNECTICUT • Information Highlights

Area: 5,009 square miles (12,973 sq km).
Population: 2,925,000 (July 1, 1967 est.).
Chief Cities (1967 est.): Hartford, the capital, 161,000; Bridgeport, 155,200; New Haven, 148,200; Stamford, 108,400; Waterbury 107,900; New Britain, 86,300.
Government: *Chief Officers—governor,* John N. Dempsey (Democrat); lt. gov., Attilio R. Frassinelli (D); secy. of state, Ella T. Grasso (D); atty. gen., Robert K. Killian (D); treas., Gerald A. Lamb; supt. of pub. instr., William J. Sanders; chief justice, John Hamilton King. *Legislature*—General Assembly (met Jan. 4–June 7, 1967): Senate, 36 members (11 Republicans, 25 Democrats); House of Representatives, 177 members (60 R, 117 D).
Education: *School enrollment* (1966–67)—public elementary, 392,427 pupils (15,428 teachers); public secondary, 204,421 pupils (11,141 teachers); nonpublic schools, 130,000 pupils (5,500 teachers); college and university, 95,700 students. *Public school expenditures* (1966–67)—$360,000,000 ($657 per pupil); average teacher's salary, $7,594.
Public Finance (fiscal year 1967): *Revenues,* $794,072,502 (3.5% sales tax, $146,669,313; motor fuel tax, $59,892,586; federal funds, $140,992,209). *Expenditures,* $809,155,259 (education, $238,527,722; health, welfare, and safety, $212,040,096; highways, $166,733,754). *State debt,* $1,290,117,000 (June 30, 1967).
Personal Income (1966): $12,300,000,000; average annual income per person, $3,786.
Public Assistance (fiscal year 1966): $75,655,600 to 72,800 cases (aged, $5,051,200; dependent children, $31,052,000).
Labor Force (employed persons, Aug. 1967): *Agricultural,* 16,300; *nonagricultural* (wage and salary earners), 1,111,390 (41.8% manufacturing, 17.9% trade, 11.5% government). *Unemployed persons* (July 1967)—52,200.
Manufacturing (1965): Value added by manufacture, $5,296,356,000 (transportation and equipment, $1,088,379,000; primary metals, $441,647,000; nonelectrical machinery, $797,791,000; electrical machinery, $497,598,000; fabricated metals, $504,732,000; food and products, $182,051,000).
Agriculture (1966): *Cash farm income,* $168,884,000 (livestock, $101,264,000; crops, $66,729,000; govt. payments, $891,000). *Chief crops* (tons)—hay, 236,000; potatoes, 70,400; apples, 25,200; tobacco, 5,969; peaches, 4,080.
Mining (1966): *Production value,* $21,346,000. *Chief minerals* (tons)—sand and gravel, 9,561,000; stone, 5,618,000.
Fisheries (1965): *Commercial catch,* 4,927,000 pounds ($1,507,000). *Leading species*—scup or porgy, 958,800 pounds ($107,879); hard clams, 151,600 pounds ($62,823).
Transportation: *Roads* (1967), 17,954 miles (28,894 km); *motor vehicles* (1967), 1,642,112; *railroads* (1966), 1,585.57 track miles; *airports with scheduled services* (1966), 11.
Communications (1967): *Telephones,* 1,720,744; *television stations,* 7; *radio stations,* 47; *newspapers,* 25 (daily circulation, 1966, 888,332).

Other legislation abolished breach of promise and alienation of affection lawsuits, reorganized the probate court system, established state departments of correction and of community affairs, and revised the narcotic drug act. Enactment of a law changing the closing hour of polls from 7 P.M. to 8 P.M. meant that Connecticut will lose its importance as a source of early returns on election night. Revisions of the state's corrrupt practices act were influenced in part by the U. S. Senate's censure of Sen. Thomas J. Dodd (see UNITED STATES).

Connecticut's one-year residency requirement for aid to dependent children was declared unconstitutional by a federal court on June 19. If upheld on appeal, the ruling could affect other states with similar requirements for public assistance.

Economy. Business boomed in 1967, although the volume of corporation taxes fell slightly. Connecticut received $1.9 billion in U. S. defense spending in fiscal 1967, ranking it fifth among the states (after California, Texas, New York, and Missouri).

Civil Disorders. Hartford, New Haven, Bridgeport, Waterbury, and New Britain each experienced racial disorders in 1967. The worst occurred in New Haven on the nights of August 19–21, when looting and fire damage was estimated at more than $1 million. A city administration known for its dedication to urban renewal and antipoverty programs, plus effective police work, brought New Haven through the rioting without loss of life.

Higher Education. In September the University of Connecticut opened a new branch at Groton. Edwin D. Etherington, former president of the American Stock Exchange, assumed the presidency of Wesleyan University, at Middletown, in October.

GEORGE ADAMS
Connecticut Legislative Reference Library

CONSERVATION

“In Wildness Is the
Preservation of the World”

CONSERVATION

The demands of the Vietnam War and other U. S. defense activities in 1967 resulted in severe cutbacks in domestic programs, including budgets for conservation activities. Although environmental problems continued to grow and there was evidence of increasing public support for conservation, there was little action on new conservation legislation.

Pollution. Air and water pollution problems grew ever more severe in 1967, while federal programs contributing to their abatement were inadequately financed. Several specialized forms of pollution drew attention during the year. Proposals for the development of supersonic commercial jetliners caused alarm about the possible psychological and physical effects of supersonic "booms" and stimulated a general interest in noise abatement. The sinking of the oil tanker *Torrey Canyon,* which dumped thousands of tons of oil on the coasts of England and France, led to calls for stricter control over the discharge of oil at sea and in inland waters.

Air Pollution. The Air Quality Act was passed by Congress and signed into law in November. The bill provides for control of air pollution on a regional basis. Standards and enforcement procedures would be determined by the states in keeping with general criteria established by the secretary of health, education, and welfare. If states fail to take reasonable measures to control air pollution, the federal government would be empowered to act. The bill provides for a 15-member Air Quality Advisory Board to assist the states on control problems.

Water Pollution. Water pollution control received some support through passage of the Public Works and Atomic Energy Commission Appropriations Act, which provided new funds for federal assistance in constructing waste-treatment-control plants. Several other bills were also under consideration, notably the "clean lakes" bill, which would provide for federal pilot programs in the prevention and control of lake pollution. The Water Pollution Control Administration of the Department of the Interior pressed a campaign in 1967 to gain local and industrial cooperation in abating the heavy pollution in Lake Erie.

The Water Quality Act of 1965 moved toward full implementation in 1967 as states submitted their required water-quality standards to the Department of the Interior for approval. These standards establish the goals toward which the states will move in their efforts to restore their waterways to more acceptable levels of purity. The secretary of the interior approved most of the state programs, but some were subject to further negotiations and change. (See also POLLUTION.)

National Parks and Wilderness Areas. During 1967 several additions were made to the nation's wilderness areas, mostly in the Western states. Under consideration by Congress was a proposed 97,000-acre Jefferson Wilderness Area in Oregon and a 680,000-acre Washakie Wilderness Area in the Shoshone National Forest of Wyoming. The Senate passed a bill to establish the Sawtooth National Recreation Area in Idaho. It will include a major wilderness area. In California, a new San Rafael Wilderness Area received the approval of Congress.

JAMES TANNER FROM NATIONAL AUDUBON SOCIETY

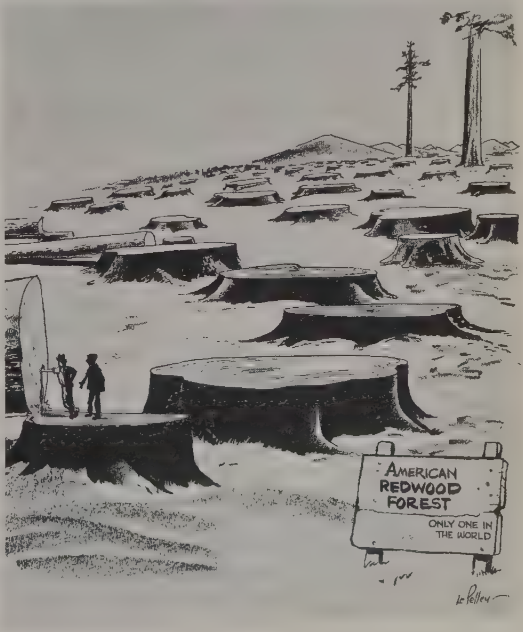
THE IVORY-BILLED WOODPECKER, a species thought to be extinct, has been found surviving in small numbers in the Big Thicket, a large forest area in eastern Texas.

A bill passed by the Senate would create a two-unit North Cascade National Park from national forest land in northern Washington. The bill provides for a 303,000-acre northern park and a 200,500-acre southern park, as well as two major national recreation areas in the North Cascades. Also included in the bill is a provision for the establishment of a 520,000-acre Pasayten Wilderness Area and additions to the existing Glacier Peak Wilderness Area.

The Redwood National Park proposals entered their third year of controversy. Efforts to create a redwood park in northwestern California were ham-

"If the British had any money-making sense, they would sell off those slabs at Stonehenge."

LE PELLY IN THE CHRISTIAN SCIENCE MONITOR © TCSPS



(*Left*) CONSERVATION is being promoted by the Sierra Club in nature posters such as this. Quotation is from club's illustrated book of the same title. The photograph was taken by Eliot Porter.

JOB CORPS WORKERS on Cape Cod remove oil from birds trapped by a slick that washed ashore at Wellfleet, Mass.

pered by conflicting proposals from the Department of the Interior and various private conservation groups, as well as by the unrelenting opposition of the timber industries. In October, efforts to reach a compromise culminated in the introduction of bills to establish a two-unit park. One unit, located on Mill Creek in Del Norte county, would contain the area recommended for a national park by the Department of the Interior. The second unit, located in the Prairie Creek-Redwood Creek region of Humboldt county, would contain much of the area proposed for a national park by the Sierra Club and other conservation groups. This compromise bill passed the Senate and House action was expected in 1968.

(See also FORESTRY AND LUMBERING; NATIONAL PARKS.)

Water and Power Development. Conflicting interests between conservation plans and water and power development created several controversies in 1967.

Efforts to protect the Grand Canyon from the effects of dams included in plans for the Central Arizona Project moved toward success in 1967. Congress deleted the controversial Bridge Canyon and Marble Canyon dams from the legislation before it authorized the Central Arizona Project. Although further efforts to construct these dams were expected, a temporary victory at least was achieved.

The Supreme Court in 1967 required the Federal Power Commission to reconsider licensing applications for a hydroelectric dam in the High Mountain Sheep area of the Snake River. In what was expected to be a highly significant decision, the court ruled that fisheries and wildlife interests had been given inadequate consideration and that the public interest might best be served by seeking alternative methods for power development. Some conservationists felt that the decision might set a precedent that would apply to the continuing effort to prevent construction of a power plant at Storm King Mountain on the Hudson River in New York state.

The Department of the Interior recommended against construction of Rampart Dam on the Yukon River in Alaska. The massive Alaskan dam proposal was still far from final defeat, however, as Alaskan development interests pressed for its construction.

Threats to the conservation of natural resources inherent in massive water development schemes led conservationists in 1967 to take an interest in the proposed North American Water and Power Alliance. This $100 billion project would involve channeling Alaskan and Canadian waters southward into the United States and Mexico. It would include construction of waterways, dams, reservoirs, and power plants on a scale that would dwarf all existing water and power developments.

Estuaries and Islands. There was growing concern for the shorelines and island systems of the United States as the deterioration of these scarce resources quickened under the growing pressure of development. It was estimated that dredging and filling during the past 20 years had already destroyed 7% of the best fish and wildlife habitat areas in the nation's estuaries. Pollution had further damaged the quality of estuarine environments.

An agreement was reached between the Department of the Interior and the Corps of Engineers that provides for consideration of conservation values in issuing permits for dredging and filling in the nation's estuaries. The engineers agreed to withhold permits when the Interior Department recommends against their issuance for the protection of fish and wildlife habitats.

In Florida, however, the right of the Corps of Engineers to withhold permits on such grounds was being tested in the courts. The trend in legislative and judicial action, in Florida and in other states, has been toward increasing public control over estuarine development. Several bills slated for congressional action at the end of the year called for a complete study and inventory of the nation's estuaries by the Department of the Interior.

A study and inventory of the island resources of the United States was being conducted by the

U. S. DEPARTMENT OF THE INTERIOR-NATIONAL PARK SERVICE

THE NORTHERN CASCADES region in the state of Washington is one part of a proposed national park that would also include another section in northern Washington.

Bureau of Outdoor Recreation in 1967. The American Island Survey will help to determine the need for public action to protect these environments. Several other steps were taken at the federal level to protect some of the nation's islands. Plans were approved to purchase St. Vincent's Island, Florida, as part of the federal waterfowl refuge system. Congress also passed a bill to establish a national lakeshore in the Apostle Islands of Wisconsin.

Endangered Species. The Fish and Wildlife Service reported success with programs designed to perpetuate certain rare species in captivity at the Patuxent (Md.) Wildlife Research Station. Sightings of ivory-billed woodpeckers, thought to be extinct, were reported in the Big Thicket in eastern Texas.

Proposed Department of Natural Resources. The long campaign of Sen. Frank Moss of Utah to promote the creation of a federal Department of Natural Resources culminated in a bill, introduced in the Senate in 1967, that would change the present Department of the Interior into a Department of Natural Resources. Under the proposed act certain agencies, such as the Bureau of Indian Affairs and the Office of Territories, would be moved to other departments. The new department would absorb certain agencies within the present Department of the Interior, such as the Forest Service, and would take over the civilian functions of the Corps of Engineers. In practice the new department would have jurisdiction over most of the nation's conservation programs with the exception of those directly related to agriculture. No action was taken on the bill during 1967.

RAYMOND F. DASMANN
The Conservation Foundation

CONSTANTINE II, King. See biographical sketch under GREECE.

CONSUMER AFFAIRS

STAN WAYMAN FOR LIFE MAGAZINE © TIME, INC.

CONSUMERS keep an eye on conspicuous food costs—and so does their Washington "spokeswoman," Betty Furness.

CONSUMER AFFAIRS

United States families were better off financially in 1967, on the average, than they were in 1950. This was because average personal incomes had risen faster than prices. Slightly over half of the increases in consumer incomes, however, had been eaten up by the price increases.

In the 17-year period ending in 1967, average per capita family income after taxes increased by 99% in current dollars. But after allowance for the deterioration of the dollar because of price rises, the increase in real income was reduced to 45%.

GENERAL PRICE TRENDS

In 1966 and 1967 consumer living costs in the United States rose at an annual rate of 3.2%, slightly above average for the world's developed countries. West Germany, France, and Britain had lower inflation rates, while Italy and Japan had higher rates. The above-average increase marked a change for the United States, which had been experiencing one of the world's lowest inflation rates. As a result the U. S. balance of payments may worsen.

Consumer prices, as measured by a U. S. Bureau of Labor Statistics index for city wage earners and clerical workers, had averaged 113.1 for 1966 (1957–59 = 100). After starting 1967 at 114.7 for January, the index rose each month without interruption, reaching 117.1 in September 1967.

Wholesale prices for all commodities fluctuated in a relatively narrow range in 1967. The index figure stood at 106.2 in January, dropped, rose, and dropped again to 106.2 in September.

For at least four reasons, the prospects are that U. S. living costs will climb even more rapidly in 1968 and possibly beyond. The reasons are:

(1) The American technological explosion coupled with high employment levels is increasing the demand for skilled personnel, who already are in short supply. The country has an overall unemployment rate approximating 4%, but half of that figure includes teen-agers and housewives with few job skills. Unemployment among married men in September 1967 was near 1.8%, about the minimum achievable in light of job changes, illness, etc.

(2) Wages have begun to rise faster than productivity. This causes unit costs to rise. In 1967 the more powerful unions received wage and benefit increases of 6% or more per year, while productivity has been rising by about 3% per year.

(3) Sizable deficits ($8 to $16 billion) in the federal government's budget appear likely, due largely to the Vietnam War.

BETTY FURNESS, former actress and television personality, succeeded Esther Peterson in May 1967 as President Johnson's special assistant for consumer affairs. She also serves as chairman of the President's Committee on Consumer Interests and executive secretary of the Consumer Advisory Council. In her testimony before congressional committees, she made a number of recommendations for measures to protect the interest of the consumer.

Miss Furness was born in New York City on Jan. 3, 1916, and educated at Bennett College in Millbrook, N. Y. From 1932 to 1937 she was a motion picture actress, appearing in some 35 Hollywood films, including *Magnificent Obsession* and *Swing Time*. Among the stage plays in which she has appeared are *Golden Boy, My Sister Eileen,* and *The Doughgirls*. She attained considerable popularity for her Westinghouse television commercials in 1949–60.

(4) After a long period of relative stability, the wholesale price index of nonfarm products began to rise in the last half of 1967. This rise will be reflected in higher consumer prices in 1968 unless the government takes drastic deflationary measures.

AGGREGATE CONSUMER SAVINGS

In 1967, U. S. households saved at the highest rate since 1953, which had seen the previous all-time high. Normally, Americans save about 5% of their disposable income, but the rate averaged nearly 7% in the first three quarters of 1967. Surveys indicated that families were in a cautious spending mood because of uncertainties that included the Vietnam War, prices, and taxes. It appeared, however, that their caution was diminishing, and that they were likely to increase their spending somewhat. This caused serious concern in Washington because any increase in consumer spending rates would only accelerate already existing inflationary tendencies.

Consumer spending of personal income plus accumulated liquid savings had fluctuated between 51.4% (1960) and 49.3% (1966). At the end of 1967 personal income plus accumulated liquid savings reached approximately $1 trillion. With such a large base, even a slight shift in the propensity to spend could have serious consequences for the economy. For example, had consumers spent in 1967 at their 1960 rate, total consumer expenditures would have been about $19 billion greater than they were. This increase, on top of military expenditures for Vietnam, would have created a severe inflationary pressure in 1967. U. S. government officials were fearful that consumers might go on a spending spree in 1968, and they insisted that tax increases are needed to "mop up" some of the excess purchasing power.

The increase in personal savings takes into account the 1967 decrease in consumer indebtedness (because indebtedness is defined as negative savings). The gap between new consumer installment credit extended and consumer installment credit repaid narrowed in 1967. Mortgage indebtedness also decreased in 1967, largely because of the tighter money policy imposed by the Federal Reserve System in its attempt to reduce inflationary tendencies. Consumers were in a good position to increase credit buying if they wished.

TRENDS IN LIVING STANDARDS

The Bureau of Labor Statistics has analyzed living standard trends by simulating a "well-established" family of four persons composed of a 38-year-old employed husband, a wife not employed outside the home, an 8-year-old girl and a 13-year-old boy—all living at levels that were regarded as modest for each of the periods in question. In 1951 that family needed $3,730 of expenditures for an average location in the United States; by 1959 it needed $5,180; by 1967 it needed $9,400.

Only about 40% of the increased money requirements for that family between 1951 and 1967 can be attributed to higher prices, while 50–60% reflects changed buying habits and rising living standards. Many budget adjustments since 1951 reflect changes in educational levels, cultural developments growing out of travel and migration, technological changes, and growth of purchasing power.

Slightly under 80% of the family expenditures are needed for "consumption," which was divided during 1967 as follows: food, 23.3%; housing, 24.1%; transportation, 8.9%; clothing and personal care, 10.6%; medical care, 5.1%; and miscellaneous, 7.8%. The remainder went for taxes, 11.8%; social security, 3.1%; gifts and contributions, 2.8%; insurance, 1.7%; and occupational expenses 0.9%.

The so-called typical "modestly living" family covered in the study had a 1967 income of $11,000. The big changes in the family budget since 1959 were a 25% increase in food expenditures, bigger outlays for health insurance and dental care, increased auto ownership, more casual clothing (but some declines in dress clothes), and more for men's, women's, and girls' personal care.

DIFFERENCES BETWEEN CONSUMERS

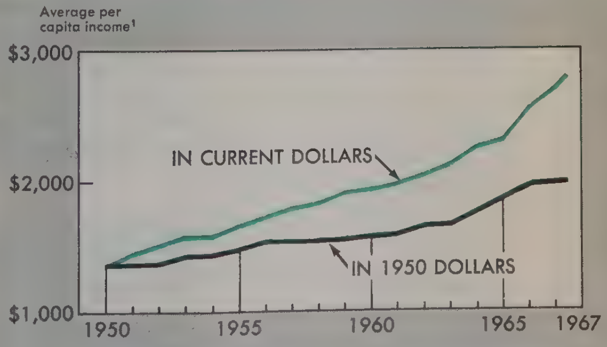
More interesting than aggregate consumer trends are the experiences of individual consumer groups.

Union Workers. In 1967 the more powerful unions won pay and fringe benefit increases averaging 6% or higher. (The United Auto Workers, for example, received a new contract calling for increases of 6.5% per year for three years.) Such increases are approximately double the rate at which consumer prices are rising, so the net purchasing power gains of strongly unionized workers will be about 3% per year if past trends continue. Unfortunately, annual wage increases of about 6% are double the national average rate of productivity gains. Critics charge that such a wage-productivity relationship can lead only to accelerated inflation.

Retired Persons. Retired persons experienced a deterioration in their real incomes in 1967. Their incomes remained more or less fixed while consumer prices rose. The problem of recipients of fixed income may be illustrated by supposing that prices continue to rise by an annual rate of 3.1%. The purchasing power of their dollars then would drop to 83 cents within 5 years, to 64 cents within 10 years, and to 42 cents within 15 years. Such a deterioration would be difficult to bear, especially considering that the per capita disposable real personal incomes of younger households promises to be rising over that same period.

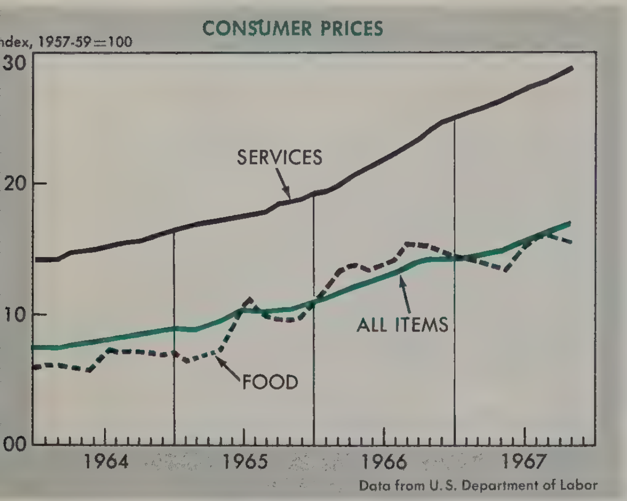
Negroes. The unemployment rate of Negroes at the end of 1967 was more than double that of whites. Overall, it was 8.8% for Negroes compared with 3.8% for whites. This higher unemployment rate was attributed to a variety of reasons: the greater incidence of broken families among Negroes, thus forcing a higher proportion of unskilled Negro

HOW INFLATION EATS INTO INCOME



[1] Average per capita disposable personal income (after taxes) for the United States.

Source: U. S. Department of Commerce, Survey of Current Business


CONSUMER PRICES

Data from U. S. Department of Labor

women than of unskilled white women into the job market; the higher proportion of school dropouts among Negroes than among whites, thus throwing relatively more unskilled Negro than unskilled white teen-agers into the job market; the generally lower education and skill levels of Negroes than of whites, because of their inferior education and migrations from the rural South; and to an unknown extent, racial discrimination. The net result is that Negro consumers participated in the nation's prosperity to a relatively lesser extent than did white consumers.

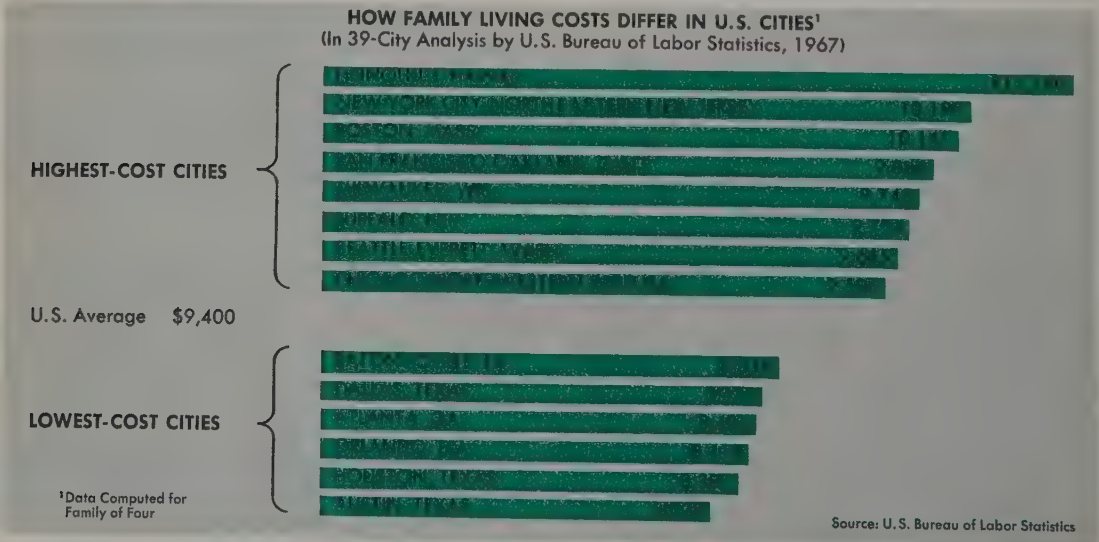
Similar information is not available regarding other minority groups, such as the American Indians, Mexican Americans, and Puerto Ricans. It appears, however, that many among those minority groups fared even worse than did the Negroes.

Regional Differences. Differentials in the national development create regional differences among consumers. In the first quarter of 1967 there was a substantial slowdown of growth in factory payrolls for manufactured consumer durables, and farm incomes declined by 2.5% from the previous quarter. Conversely, wage and salary payments rose for trade, construction, and nondurable manufactures. Because particular industries tend to concentrate within given regions, such changes will have a differential impact on various geographical areas. In the first quarter of 1967 the average income payments within various U. S. regions changed from the preceding quarter as follows:

Rocky Mountain	+4.2%
Mideast	+2.0%
Great Lakes	+1.5%
Far West	+1.5%
Southeast	+1.5%
Southwest	+1.3%
Plains States	+1.0%
New England	+1.0%

City-Rural Differences. Income differences also exist between the larger cities and rural areas. Preliminary analysis under way in 1967 indicated that in 1962 per capita incomes in the nonmetropolitan areas of 24 states averaged only 62% of that in the larger metropolitan areas (the latter are the Bureau of Labor Statistics' "standard metropolitan statistical areas"). When allowance is made for higher living costs in the larger metropolitan areas, the average nonmetropolitan income becomes 70% of the average metropolitan income in real terms. This differential helps explain why unskilled rural people have been migrating to cities in large numbers in recent years. This migration also is causing per capita incomes in the nonmetropolitan areas to rise faster (64% between 1950 and 1962) than in the larger metropolitan areas (56% between 1950 and 1962).

Inequality of Income Distribution. A significant differential among consumers is the growing inequality of income distribution. The technological explosion places a premium on persons with technical and administrative skills, without changing the economic worth of unskilled labor. The result is that the incomes of upper socioeconomic families are rising much faster than those of the lower socioeconomic families. As the upper groups increase their consumption, the lower groups feel a pressure to spend more than their incomes permit. This has resulted in rising bankruptcy rates. In 1965, for example, more than 167,000 families filed bankruptcy petitions, and it was estimated that 20 times that number were experiencing an extremely serious debt squeeze. Bankruptcy threatens to increase as a problem for business credit managers in the next several years.


HOW FAMILY LIVING COSTS DIFFER IN U.S. CITIES¹
(In 39-City Analysis by U.S. Bureau of Labor Statistics, 1967)

¹Data Computed for Family of Four

Source: U.S. Bureau of Labor Statistics

Another manifestation of growing inequality of income distribution is the soaring U. S. relief rolls. In the 10-year period ending in 1964, the numbers of persons on relief increased 42% while the U. S. population increased only 18%. Relief costs over that period increased 90%. To a certain extent the increases reflect greater liberality in granting relief; even more, they result from the mass migrations of unskilled people from Southern rural areas to Northern cities where unskilled jobs are scarce because of technological advances.

The nation's poor often pay higher prices than the affluent do. In 1967 the Bureau of Labor Statistics conducted surveys in both the high-income and the low-income areas of six communities: Atlanta, Chicago, Houston, Los Angeles, New York, and Washington. The bureau found that on the average the poor in those cities had to pay higher prices for equivalent food, rent, and household appliances than did the well-off. The major reason was the predominance of small "mama and papa" stores in the poor neighborhoods, while large supermarkets and department stores tend to dominate the affluent neighborhoods. The latter stores typically have lower margins per unit because of volume sales and low credit losses. The relatively high rent paid by the poor, however, has not been adequately explained.

Regional Living Cost Differences. Living costs differ substantially between areas because of differences in climate, food preferences, state and local taxes, and prices. The Bureau of Labor Statistics has calculated what a 4-person family would have to spend to maintain itself modestly in each of 39 cities in 1967.

The federal figures showed that in 1967 it would have cost a family of four persons $2,167 more per year to live modestly in New York City than in Austin, Texas. That is, living costs for such a family were 27% higher in New York than in Austin—$10,195 vs. $8,028. Obviously, a person should not look only at income when weighing the economic advantages of moving; comparative living costs also should be considered.

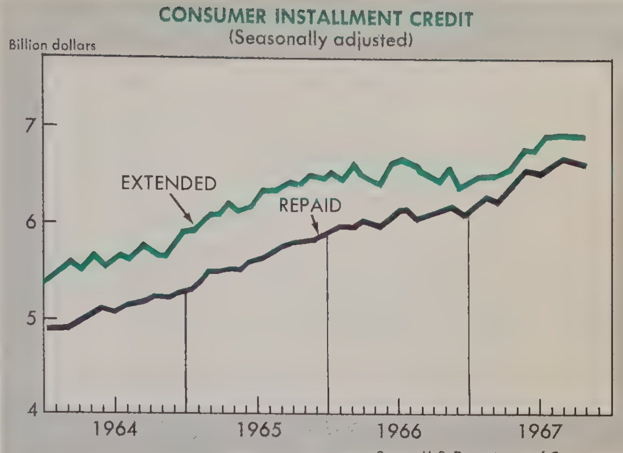
CONSUMER REACTIONS

In 1967, U. S. housewives failed to repeat their picketing and buyers' strikes of 1966. The reason is not completely clear, but a plausible explanation is that food prices rose during 1966 and then declined slightly in 1967 even though most nonfood prices increased.

Food is one of the few big items in the family budget that is bought with sufficient frequency for price changes to be clearly noticeable. Clothing, for example, is purchased seasonally, and price changes are obscured by style changes; automobiles are bought over several-year intervals during which changes occur in size, style, and engineering.

It appears logical that housewives might use food prices as a kind of indicator of general living costs over the short run. Arthur M. Ross, commissioner of labor statistics, has noted that housewives are sensitive about meat prices—especially about bacon prices. A great deal of "hate mail" reaches Washington whenever the price of bacon rises. This does not mean that housewives fail to notice other price rises; rather, their emotional reactions are tied especially closely to food price increases. In late 1967 quiet efforts were being undertaken to organize all consumer groups within the United States into a single consumer federation, but no dramatic actions were attempted.

CONSUMER INSTALLMENT CREDIT
(Seasonally adjusted)



Souce: U. S. Department of Commerce

Consumer organizations tend to focus on prices rather than on family income, but labor unions are concerned with income rather than prices. Logically, both groups should be concerned with what they can buy rather than income alone or prices alone.

Perhaps there is a tendency toward a division of labor within families: husbands concentrate on earning the income and wives concentrate on spending it. Housewives, then, would be the backbone of any consumer movement. The possibility is raised that as more and more married women enter the country's labor force their concern with prices will tend to weaken.

The social desirability of a consumer movement for price stability depends on the importance of maintaining price stability. Certain Latin American economists argue that economic development can be facilitated by mild inflation. Most United States economists, however, seem to prefer price stability. The latter goal seemingly could be promoted by a consumer movement organized as a countervailing force against both excessive wage demands by labor unions and excessive profit demands by stockholders. Some kind of a balance among wages, profits, and prices appears needed, but it is unclear how this could be achieved by the market mechanism in an era of large corporations and strong unions. The alternative to an effective consumer organization might have to be some kind of governmental controls.

To a certain extent the so-called race riots of 1966–67 would appear to be a consumer reaction of disadvantaged groups against the growing inequality of income distribution. The technology of our time has reduced the economic value of unskilled labor to a very low level. For this reason the poor cannot exert much economic pressure through strikes to increase their well-being, and they are too few numerically to exercise much pressure at the polls. One of the few bargaining weapons available to them is to threaten to disrupt and to destroy whatever the affluent have until their aspirations are met. The affluent regard this as a form of gangsterism. It is very possible that increasingly violent means will be used by the underprivileged over the next decade to check the inequality of income distribution.

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COPPER

World production of mined copper in 1966 rose to a record 5,855,000 short tons, almost 5% higher than the 1965 total of 5,590,000 tons, according to the U. S. Bureau of Mines. The United States provided 24.4% of the world's mined copper in 1966; the USSR, an estimated 15.1%; Chile, 12.4%; Zambia, 11.7%; Canada, 8.7%; and the Democratic Republic of Congo, 5.9%. In all of these countries, except Zambia, 1966 production exceeded that of 1965.

World output of smelter copper rose to a record 6,440,000 short tons, or 5.5% higher than the 1965 total of 6,100,000 tons.

U. S. Production. Domestic output of mined copper increased 5.7% to a record 1,429,152 short tons in 1966. Arizona mined 52% of the national total. Production of smelter copper from domestic and foreign ores (exclusive of scrap) rose from 1,434,050 tons in 1965 to 1,581,107 tons in 1966.

In the first eight months of 1967, the U. S. output of mined, recoverable copper totaled 858,347 short tons—an 8.6% decrease from the 938,429 tons mined in the first eight months of 1966. A strike against about 90% of the U. S. copper industry began on July 15, 1967, and its effects were reflected in the production figures. In the January-to-July period smelter output decreased to 848,736 tons in 1967 from 849,889 tons in 1966.

U. S. MINE PRODUCTION OF COPPER
(In short tons)

State	1963	1964	1965	1966
Arizona	660,977	690,988	703,377	739,569
California	916	1,035	1,165	1,078
Colorado	4,169	4,653	3,828	4,237
Idaho	4,172	4,666	5,140	4,961
Michigan	75,262	69,040	71,749	73,449
Missouri	1,816	2,059	2,331	3,913
Montana	79,762	103,806	115,489	128,061
Nevada	81,738	67,272	71,332	78,720
New Mexico	83,037	86,104	98,658	108,614
Tennessee	13,717	13,889	14,823	15,410
Utah	203,095	199,588	259,138	265,383
Others	4,505	3,680	4,704	5,757
Total	1,213,166	1,246,780	1,351,734	1,429,152

Source: U. S. Bureau of Mines.

U. S. Consumption. Consumption of new copper in the United States in 1966 was the largest since 1942. Consumption of refined copper in 1966 was 2,335,848 short tons. The highest U. S. output on record failed to meet the increased demands of an expanding economy and defense needs, but some of the deficit was offset by releases from government stockpiles.

U. S. Trade. U. S. imports of copper ore and concentrates in 1966 increased by 14.1%, with the Philippines supplying 51% of the total, followed by Canada and Peru. There was a 5.2% increase in imports of blister copper. Imports of refined copper increased 18.3%, with Canada supplying 53%. Imports of scrap rose 79%.

U. S. exports of refined copper in 1966 decreased 16% from 1965; Italy, Brazil, the United Kingdom, and France were the major importers. West Germany and Japan also took substantial shipments. Japan received 35% of the copper scrap, West Germany 15%, and Spain 14%.

(See also MINING.)

BERENICE B. MITCHELL
U. S. Bureau of Mines

COST OF LIVING. See CONSUMER AFFAIRS.

COSTA E SILVA, Artur. See biographical sketch under BRAZIL.

COSTA RICA

Costa Rica maintained its customary liberal outlook in foreign affairs in 1967, while political and economic bickering dominated the domestic scene.

Domestic Affairs. Despite having the highest per capita level of gross national product in all Central America, Costa Rica began the year with fiscal headaches. Because of a dip in earnings from coffee, which usually approximates 41% of exports, and because of increased need for dollar reserves, the colón was devalued on January 2 from 6.625 to 6.65 to the U. S. dollar. A month later free exchange put the colón at 8 to the dollar.

President José Joaquín Trejos Fernández, backed by a minority in the unicameral legislature, continued to struggle for support of his economic measures. The opposition joined Trejos in feeling concern over the economic and fiscal plight of the nation. But several factions within the ruling coalition, tempering national need with political desire, were loath to strengthen the political position of Trejos by supporting his demand for higher taxes and fiscal austerity.

Early in 1967 the president had to withdraw certain fiscal measures from consideration by the Legislative Assembly because of widespread opposition to them. While citizens protested the rising cost of living during a period of frozen wages, many public servants raged at the threatened cuts in their salaries. On April 21 a bomb blast injured 20 persons at an outdoor political rally in Parque Morazan, San José.

The economic problems focused attention on the Instituto Costarricense de Electricidad (ICE). Founded in the 1950's during the regime of President José Figueres Ferrer and dedicated to increased production of electrical energy, improved communications, and the conservation of hydraulic resources, it had had notable success. Now, however, construction of the giant Cachí plant had been hit by delays and mounting costs, the latter 50% above original estimates.

Foreign Affairs. In January, Clarence A. Boonstra was named and confirmed as the new U. S. ambassador to Costa Rica. On February 14, in Mexico City, Costa Rica signed the treaty that aims to establish Latin America as a nuclear-free zone. At the Organization of American States (OAS) meeting of foreign ministers in Buenos Aires, February 15–26, and at the OAS summit meeting at Punta del Este, April 12–14, Costa Rica favored arms-reduction programs. At another meeting of the OAS held in Washington, D. C., in September, Costa Rica voted with the majority to condemn Cuba for subversive activities in Venezuela and Bolivia.

During the Israeli-Arab conflict, Costa Rica uniformly backed the position and proposals of the United Nations. At midyear the Inter-American Development Bank announced a loan of $1,370,000 to the University of Costa Rica to help improve investigative techniques and technology, in support of the program of the Alliance for Progress.

President Trejos and a party of 34 officials were were guests of Mexico on June 5–8. Returning the visit to Costa Rica made by Mexican President Gustavo Díaz Ordaz early in 1966, they strengthened the friendly ties between the two nations and looked forward to increased trade, areas of joint investment, and improved communications and transportation. Economic matters dominated the official discussions.

COSTA RICA • Information Highlights

SOUTH AMERICA

Area: 19,575 square miles (50,700 sq km).
Population: 1,510,000 (Jan. 1, 1967 prelim. est.).
Chief Cities (1963 census): San José (1964 est.), the capital, 173,725; San Sebastián, 23,166; Guadalupe, 21,413.
Government: *President*—José Joaquín Trejos Fernández (took office May 8, 1966). *Parliament*—Legislative Assembly, 57 members (party seating, 1967: National Liberation party, 29; Unification party, 26; others, 2).
Religious Faiths: Roman Catholics, 75.9% of population.
Education: *Literacy rate* (1963), 84% of population aged 15 and over. *Total school enrollment* (1964)—310,559 (primary, 263,702; secondary, 36,530; teacher-training, 2,332; technical, 2,862; University of Costa Rica, 5,133).
Finance (1966 est.): *Revenues,* $82,300,000; *expenditures,* $94,300,000; *public debt* (1965), $142,800,000; *monetary unit,* colón (6.65 colónes equal U. S.$1).
Gross National Product (1966): $635,000,000.
National Income (1966): $538,500,000; average annual income per person, $369.
Cost of Living (1966): 114 (1958=100).
Manufacturing (metric tons): Sugar (1966), 113,000; cement (1965), 118,900; beer (1963), 8,600.
Crops (metric tons, 1966–67 crop year): Bananas (1964–65), 486,000; coffee, 76,800; dry beans, 14,000.
Minerals (metric tons, 1965): Limestone (1964), 126,200.
Foreign Trade (1966): *Exports,* $138,740,000 (chief exports: coffee, $52,660,000; bananas, $33,290,000; cacao, 3,140,000); *imports,* $178,570,000 (chief imports, 1965), electrical machinery, $15,633,000; textile yarn fabrics, $15,623,000; road motor vehicles, $12,756,000). *Chief trading partners* (1965): U.S. (took 51% of exports, supplied 42% of imports); West Germany (took 11% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 11,931 miles (19,201 km); *motor vehicles* (1965) 36,132 (automobiles, 22,946); *railways* (1965), 437 miles (703 km).
Communications: *Telephones* (1966): 21,805; *television stations* (1965), 3; *television sets* (1965), 50,000; *radios* (1965), 130,000; *newspapers* (1964), 6 (daily circulation, 107,000).

In July a preparatory session of Central American planners in San José looked forward to linking the Central American Common Market to Mexico and certain Caribbean areas to form a larger economic bloc. This was a first step toward economic integration as advocated at the Punta del Este summit meeting.

C. Harvey Gardiner
Southern Illinois University

COTTON

The U. S. cotton crop totaled an estimated 7,618,000 bales of 500 pounds gross weight in 1967—the smallest crop since 1895. It was down 20% from the 9,575,000 bales produced in 1966 and 49% from the 1961–65 annual average of 14,935,000 bales.

COTTON PRODUCTION BY LEADING STATES[1]

State	Average 1961–65 (bales)	1966 (bales)	1967 (bales)
Texas	4,544,000	3,182,000	2,830,000
Mississippi	1,942,000	1,353,000	1,100,000
California	1,753,000	1,228,000	1,035,000
Arkansas	1,483,000	756,000	520,000
Arizona	839,000	515,000	460,000
Louisiana	572,000	449,000	430,000
Georgia	566,000	316,000	230,000
Alabama	788,000	461,000	200,000
Oklahoma	334,000	214,000	200,000
South Carolina	474,000	282,000	180,000
New Mexico	266,000	181,000	160,000
Tennessee	614,000	363,000	155,000
Missouri	419,000	162,000	60,000
North Carolina	300,000	94,000	45,000
Other states	41,000	19,000	13,000
U. S. total	14,935,000	9,575,000	7,618,000

[1] In 500-pound gross-weight bales containing about 480 pounds of lint. (Source: Statistical Reporting Service, U. S. Department of Agriculture.)

Production dropped because growers diverted more acres from production in 1967 than in 1966, and the planting season was the worst of record in many areas. Growers planted only 9,502,000 acres in cotton—847,000 acres less than in 1966 and 5,840,000 acres below the five-year average. Almost 15% of the planted acreage was abandoned because of weather damage; this was the highest abandonment of record, except for the heavy plow-up in 1933.

An additional 68,500 acres were planted in American Egyptian cotton, and yielded 63,600 bales.

The yield per acre for 1967 was a national average of 452 pounds of lint (unginned cotton) per harvested acre—the first time since 1962 that yield had fallen below a bale per acre. It was 28 pounds per acre below the 1966 yield and 39 pounds below the five-year average. Arizona—with 901 pounds per acre—had the highest yield among the states.

U. S. Stocks. Cotton stocks carried over into the 1967–68 marketing year totaled 12,433,300 running bales, or 4,429,200 less than a year earlier. With the smallest carry-over since 1964, the 1967–68 total cotton supply, including imports, was estimated at 20,185,000 bales. The total fell short of the 1966-67 supply by 6,641,000 bales.

World Production. Total cotton output of all countries in the crop year 1967 was estimated at 47,400,000 bales, about the same as the previous season but 10% below the record 1965–66 production of 53,000,000 bales and nearly a million bales below the 1960–64 average. Production outside the United States amounted to 39,353,000 bales, compared with the 1966 crop-year output of 37,796,000 bales and the 1960–64 average of 33,481,000 bales. World acreage was down 463,000 acres, while yields, averaging 304 pounds, were 2 pounds per acre more than during the previous season.

COTTON PRODUCTION BY LEADING COUNTRIES[1]

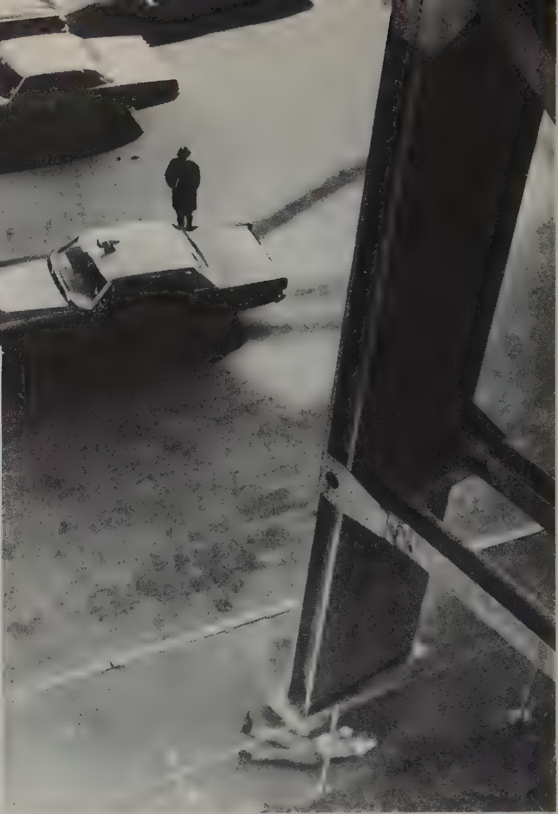
Country	Average 1960–64 (bales)	1966 (bales)	1967 (bales)
USSR	7,370,000	9,300,000	9,400,000
United States	14,860,000	9,575,000	8,089,000
China, Communist	4,940,000	5,700,000	6,000,000
India	4,741,000	4,600,000	5,300,000
Pakistan	1,656,000	2,100,000	2,300,000
Brazil	2,235,000	2,000,000	2,300,000
Mexico	2,206,000	2,250,000	2,200,000
United Arab Republic	2,037,000	2,090,000	...
Turkey	1,091,000	1,750,000	1,750,000
Iran	494,000	519,000	600,000
Nicaragua	343,000	525,000	500,000
Peru	632,000	475,000	450,000
Colombia	335,000	400,000	450,000
Greece	377,000	404,000	430,000
Uganda	288,000	335,000	365,000

[1] All production, other than U. S., is in bales of 480 pounds net. U. S. production is in 500-pound gross-weight bales which, however, contain about 480 pounds of lint. Years shown refer to crop years beginning August 1. (Source: Foreign Agricultural Service, U. S. Department of Agriculture.)

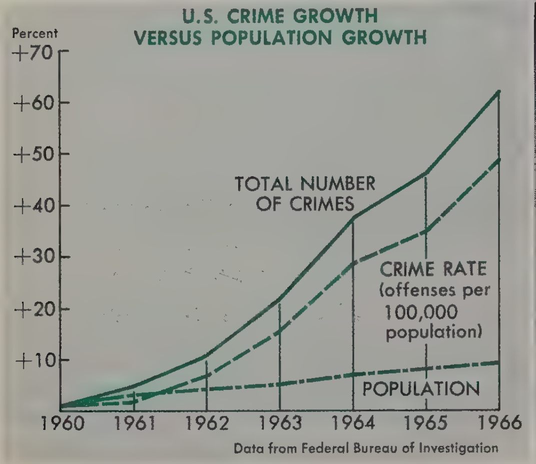
William Whyte
U. S. Department of Agriculture

CRIME

GROWING CRIME RATES include gangland slayings, in which the victim's body (*bottom of photo*) is often left in an area far from the actual scene of the crime.



OLIVER NOONAN FOR BOSTON HERALD-TRAVELER



Data from Federal Bureau of Investigation

CRIME

Violent crime remained a major concern to the citizens of the United States in 1967. Although property crimes continued to increase far more rapidly than crimes against the person, it was the latter category—murder, manslaughter, assault, armed robbery, and rape—that was creating public havoc, particularly in metropolitan areas. The increasingly discomforting profile of criminal activity in the United States caused President Johnson, in 1965, to form the President's Commission on Law Enforcement and Administration of Justice. This group, more commonly referred to as the Crime Commission, submitted its final report in 1967.

The President's Commission. The Crime Commission's report was the most sophisticated and thoroughgoing review of criminal behavior ever made in the United States. The commission offered more than 200 specific recommendations for action to reduce crime through more efficient policing, more effective administration of the system of criminal justice, and better correctional practices. Among other things, it called for a revision of welfare regulations so that they would better contribute to keeping families intact, for employment of young persons as subprofessional assistants, and for a narrowing of juvenile court jurisdiction over noncriminal matters. The commission also urged the establishment of three different entry levels for police careers in place of the usual procedure of having men begin as patrolmen and then work their way up to higher positions.

The commission declared itself in favor of programs of compensation to victims of violent crime. Compensation programs were inaugurated in California in 1966 and in New York in 1967, and were being considered by the federal Congress and 11 state legislatures.

The Crime Commission called special attention as well to "white-collar" crimes, defined as occupational crimes committed in the course of their work by persons of high status and social repute. Such offenses, it was noted, often involve a serious erosion of morals in society. "If businessmen who are respected as leaders of the community can do such things as break the antitrust laws or rent dilapidated houses to the poor at high rents," the commission said, "it is hard to convince the young that they should be honest."

Cost of Crime. The President's Commission pointed out that the picture of crime as seen through cost information is considerably different from that shown by statistics portraying the number of offenses known to the police or the number of arrests. Organized criminals, who rarely appear in arrest statistics, are believed to acquire nearly twice as much income from gambling and other illegal goods and services as regular criminals derive from all other kinds of criminal activity combined. Unreported commercial theft losses, including employee theft and shoplifting, are estimated to be more than double all reported private and commercial thefts.

The greatest single source of income to the criminal element in the United States is the profit from illegal gambling. The commission estimated that the annual income from gambling is between $6 and $7 billion. The commission also made the following estimates of the cost to society of crime:

Driving under the influence of alcohol and/or narcotics	$1,800,000,000
Narcotics	350,000,000
Burglary	251,000,000
Embezzlement	200,000,000
Larceny	196,000,000
Automobile theft	140,000,000
Forgery	64,000,000
Robbery	27,000,000

Public Uneasiness. The intensity of public concern appears in the results of a two-city survey which found that, because of their fear of crime, 43% of the respondents said they stay off the streets at night, 35% said they no longer speak to strangers, and 20% said they would like to move to another neighborhood.

The public's concern with criminal violence has been increased by the riots that are becoming a chronic summer phenomenon in the United States, striking unpredictably in city after city. The growing militancy of groups that have been traditionally passive, such as schoolteachers and nurses, has caused uneasiness regarding force and threats of force to achieve professional ends. Controversy regarding U. S. policy in Vietnam has further splintered American society, creating unrest, distrust, and frustration that often seek an outlet through violence and through explosive campaigns of reaction against violence.

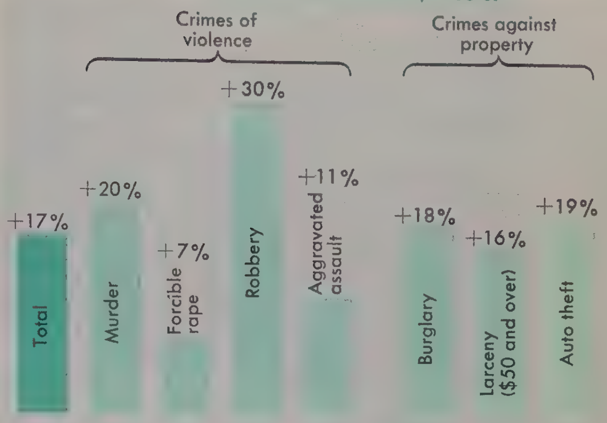
Political Repercussions. Public concern has made criminal violence a political issue, with candidates for office now finding it mandatory to put forward programs for crime control. At the national level, President Johnson presented a $350 million crime bill to Congress in February. The House revised the bill before passing it in August. Revisions gave the chief control of funds to state governors and added riot curbs. The President also sought to have gun control legislation enacted despite opposition from groups such as the National Rifle Association.

In Detroit, Mayor Jerome P. Cavanagh, faced with a recall vote, was forced to defend himself against the charge that he was lax in waging war against crime. Gov. Ronald Reagan of California claimed that he had made life safer in his state by increasing penalties for armed robbery and rape.

Crime Statistics and Trends. The concern of the public found ready support in the annual crime statistics supplied by the Federal Bureau of Investigation (FBI) in its *Uniform Crime Reports*. For 1966, the FBI reported a total of 3.3 million serious crimes, an increase of 11% over 1965. Police solutions of such crimes decreased by 8% during the interval, a situation that was presumed by the FBI to be traceable in considerable measure to Supreme Court rulings providing further constitutional protection for suspects and accused persons. Perhaps the clearest indicator of the sharp rise in criminal behavior appears in the FBI's figures on daytime residence burglaries, which show a rise of 140% between 1960 and 1966. (See also FEDERAL BUREAU OF INVESTIGATION.)

Nonetheless, despite the alarming rise in reported crime, there is growing suspicion that published figures fail to reflect accurately the true nature of criminal behavior in the United States. In its 11-volume final report issued in June 1967, the President's Commission on Law Enforcement and Administration of Justice, after a careful review of the *Uniform Crime Reports*, wondered whether "the yardstick at the present time is too changeable to allow significant [crime] trend comparisons to be made at the national level." Reviewing reported rates of robbery in Chicago and New York City during the past 30 years, the commission concluded that they were so erratic as to defy belief. It was suggested that current public concern with crimes of violence may in considerable measure represent a growing unwillingness on the part of the public to tolerate events that in earlier days were regarded as unalterable aspects of urban life. The commission also pointed out that a steadily improving system of crime reporting has made criminal activity more apparent in recent years.

U.S. CRIME INDEX TRENDS, 1966-67[1]



[1] Increases in major categories of crime in the first six months of 1967 over the same period in 1966.

Data from Federal Bureau of Investigation

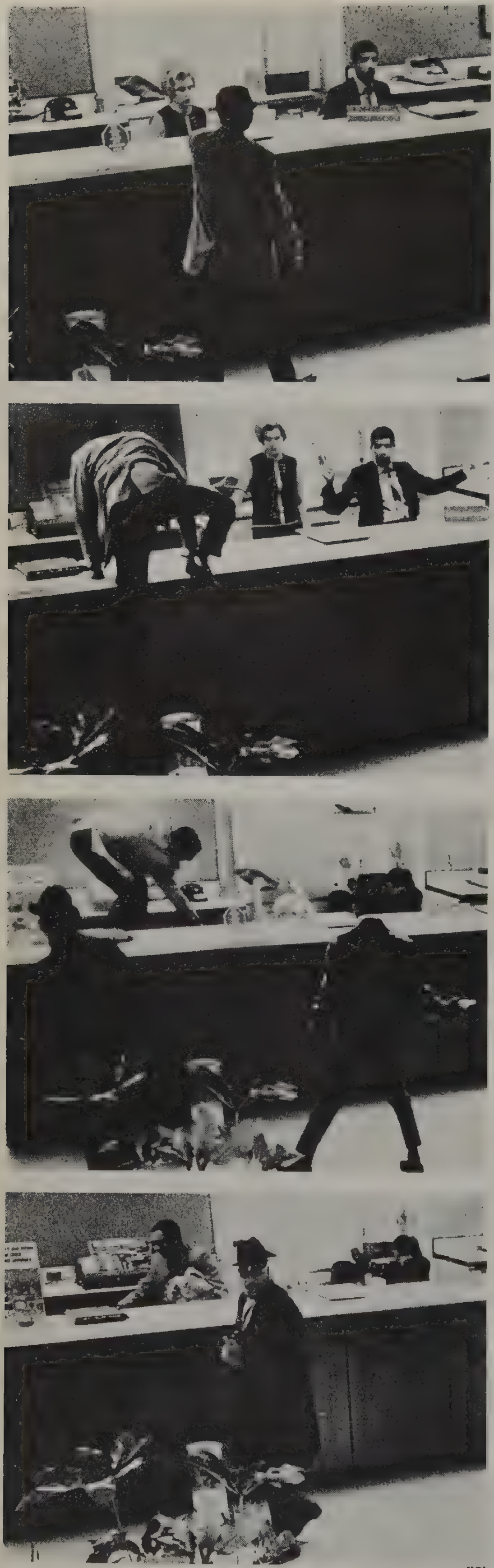
A similar note of skepticism regarding alleged increases in criminal violence was present in the March 1966 issue of the *Annals* of the American Academy of Political and Social Science. Various authors examined violence on the American labor scene, in politics, among city juvenile gangs, in prisons, and in organized crime. Their views, summarized by Marvin E. Wolfgang of the sociology department at the University of Pennsylvania, were strikingly similar: "Contrary to the rise in public fear," Wolfgang noted, "crimes of violence are not significantly increasing."

Juvenile Delinquency. Estimates from the Children's Bureau indicate that one out of every nine youths—and one out of every six male youths—will be referred to juvenile court in connection with a delinquent act (excluding traffic offenses) before his 18th birthday. In 1966 the FBI reported that about 34% of all persons arrested were under 21 years of age, and about 22% were under 18. The situation looks even bleaker if attention is paid to certain relatively serious property crimes—burglary, larceny, and motor vehicle theft. The 11-to-17-year-old age group, representing 13.2% of the population, was responsible for half of the arrests for these offenses in 1965.

Arrests for delinquency continued to rise sharply. Between 1960 and 1966, arrests of persons under 18 jumped 59% for willful homicide, rape, robbery, aggravated assault, and motor vehicle theft. During the same period, arrests of persons 18 and over for these offenses rose only 20%. Part of the increase must, however, be attributed to the disproportionate increase in the population under 18, and particularly in the 11-to-17-year age group.

The most far-reaching change in the juvenile court movement in its 68-year history was brought about with the U. S. Supreme Court decision in *In re Gault,* handed down on May 15, 1967. The Gault decision called for stricter adherence to constitutional rules in juvenile court hearings, including provision of a lawyer for the accused. (See LAW.)

Correctional Programs. The President's Commission provided the first comprehensive survey of persons under correctional supervision in the United States. The nationwide count found 2.5 million admissions in the course of a year, and 1.3 million offenders



UPI

A BANK ROBBERY in New York City was photographed in sequence (*from top to bottom*) by a hidden camera that was activated when the tellers pushed buttons hidden under the counter. The first three pictures show one of the robbers (later identified) in the act of climbing over the counter. The final picture shows a confederate facing the camera.

involved in correctional programs on an average day. Correctional budgets were found to total more than $1 billion annually. Of the offenders, 95% were males, most of them young, with juveniles making up nearly a third of all inmates under correctional supervision. More than half of the adult felon inmates had not gone as far as high school, and almost all prisoners were unskilled laborers.

Capital Punishment. The growing tendency to stress rehabilitative elements in correctional programs is reflected in the striking decrease in the use of capital punishment. During 1966 only one person was executed in the United States. Available evidence indicates that judges, juries, and governors are becoming increasingly reluctant to authorize the death sentence. Only 67 persons were sentenced to death by the courts in 1966, a decline of 31% from the previous year, and 62 prisoners were reprieved from their death sentences.

Crimes in the News. Albert H. DeSalvo, confessed "Boston Strangler," was convicted on Jan. 18, 1967, in Cambridge, Mass., of robbery, assault, and sex offenses unrelated to the notorious Boston slayings. DeSalvo confessed to the 13 unsolved murders while in prison. He pleaded insanity at his trial and was sentenced to life imprisonment. DeSalvo escaped on February 24, but was apprehended the next day.

Richard Speck, the 25-year-old seaman charged with the 1966 mass murder of eight Chicago nurses, was judged guilty on April 15, by a jury in Peoria, Ill., which recommended the death penalty.

The trial of 19-year-old Robert Benjamin Smith for the 1966 killing of four women and one child in a beauty parlor ended with a verdict of first-degree murder. In Arizona, where Smith was tried, this conviction carries a mandatory death sentence.

The slayings on Oct. 8, 1967, of Linda Rae Fitzpatrick and James H. (Groovy) Hutchinson on New York City's Lower East Side gained much public attention because of the sociological implications of the case. Miss Fitzpatrick, the daughter of an affluent Greenwich, Conn., businessman, and Hutchinson, a familiar figure on the New York hippie scene, were found brutally beaten to death in the basement of a tenement building. Much comment was provoked by the victims' involvement with drugs, their disparate backgrounds, and the dangers faced by alienated youths in urban slums. Two men were charged with the murders, and a third was sought by police.

Leo Held, described by his neighbors as a "quiet, peaceful man," went on a killing rampage in central Pennsylvania on October 23. In a few hours Held shot 12 persons, killing six of them. Finally trapped by the police near his Loganton home, he was fatally wounded and died without regaining consciousness on October 25.

GILBERT GEIS
California State College, Los Angeles;
Coauthor, "Man, Crime, and Society"

CROPS. See AGRICULTURE; COFFEE; COTTON; FRUITS; GRAINS; TEA; TOBACCO; VEGETABLES.

CROSS-COUNTRY. See SPORTS.

CUBA • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 44,218 square miles (114,524 sq km).

Population: 8,033,000 (June 30, 1966 est.).

Chief Cities (1965 est.): Havana, the capital, 982,900; Marianao, 230,000 (1960 est.); Santiago de Cuba, 240,600.

Government: *President*—Osvaldo Dorticós Torrado (took office July 18, 1959); *Premier*—Fidel Castro (took office Jan. 1, 1959). Government is controlled by a single party, the Partido Communista de Cuba (Communist party).

Religious Faiths: Roman Catholics, 84% of population.

Education: *Literacy rate* (1953), 78% of population aged 15 and over. *Total school enrollment* (1964)—1,444,923 (primary, 1,205,566; secondary, 135,745; teacher-training, 26,977; technical, 53,351; higher, 23,284).

Finance (1965 est.): *Revenues*, $2,535,000,000; *expenditures*, $2,535,000,000; *monetary unit*, peso (1 peso equal U. S.$1).

Gross Material Product (1965): $4,284,000.

Manufacturing (metric tons, 1965): Sugar (1966), 6,000,000; gasoline, 810,000; cement, 801,000.

Crops (metric tons, 1965): Rice (1964), 160,000; citrus fruits, 116,000; tobacco, 76,000; coffee (1966), 27,000.

Minerals (metric tons, 1965): Manganese ore, 75,281; chromite, 51,000; pyrites, 30,480; gypsum (1963), 24,000; nickel, 17,850; crude petroleum, 37,000; copper, 5,900.

Foreign Trade (1965): *Exports*, $686,000,000 (chief exports, 1963: Sugar, $117,320,000; tobacco, $32,620,000; inorganic chemicals, $25,280,000); *imports*, $865,000,000 (chief imports, 1963: nonelectrical machinery, $173,310,000; cereals, $83,800,000; transport equipment, $83,580,000). *Chief trading partners* (1964): USSR (took 47% of exports, supplied 41% of imports); Communist China (took 14% of exports, supplied 10% of imports); Czechslovakia (took 7% of exports, supplied 7% of imports).

Transportation: *Roads* (1964), 8,300 miles (13,357 km); *motor vehicles* (1964), 129,500 (automobiles, 88,000); *railways* (1965), 3,562 miles (5,732 km); *merchant vessels* (1966), 40 (229,000 gross registered tons); *state airline*, Cubana; *principal airport*, Havana.

Communications: *Telephones* (1965): 231,000; *television stations* (1965), 25; *television sets* (1965), 550,000; *radios* (1964), 1,345,000; *newspapers* (1961), 10.

CUBA

In 1967, during his ninth year in power, Premier Fidel Castro worked to further an independent international position for Cuba and improve the economy, especially in the area of agriculture.

International Relations. In spite of Cuba's continued dependence on Soviet economic and military aid, the year was marked by determined and at least initially successful efforts to establish Havana as a new center of world revolutionary activity, ideologically and organizationally independent of both Moscow and Peking.

In foreign policy, the main emphasis was on Cuba's close friendship with North Vietnam—1967 was officially proclaimed "the Year of Heroic Vietnam"— and North Korea, rather than with the USSR or China. In the Middle East crisis, Cuba backed the Arabs, and after their military defeat it supported the stand of the two most intransigent Arab states, Algeria and Syria. Havana also established links with several personalities of the extremist wing of the Negro movement in the United States.

Efforts to foment guerrilla warfare in Latin America were stepped up. Cuban personnel appeared among the guerillas in at least two countries, Bolivia and Venezuela. Relations with the pro-Soviet Communist parties of Latin America, which refused to participate in guerrilla activities, were strained to the breaking point. The Soviet Union itself was the target of Cuban criticism for failing to give adequate military protection to North Vietnam and the Arab states, as well as for extending commercial credit to Latin American governments hostile to Castro. Relations with Communist China remained cold.

FIDEL CASTRO has been premier of Cuba since 1959. In 1967, having previously rebuked Communist China, he also criticized the eastern European Communist nations for trading with "oligarchic regimes" in Latin America and declared that Cuba would stand alone against the "North American imperialists." Differences between the Soviet-oriented Latin American Communist parties and Cuban-supported insurgent movements appeared evident at the first conference of the Organization of Latin American Solidarity, in Havana in 1967.

Castro was born in Mayarí, Oriente province, on Aug. 13, 1927. He began his antigovernment activities as a law student at the University of Havana in the late 1940's. On July 26, 1953, he began to lead guerrilla attacks against the Batista regime, which he succeeded in overthrowing on Jan. 1, 1959. Soon after becoming premier, Castro broke with the United States and aligned Cuba with the Communist bloc.

Debray and Guevara. In January, Havana issued a major ideological statement asserting Cuba's claim to the leadership of the Latin American revolution. It was the French writer Régis Debray's book *Revolution in the Revolution?* Its Cuban publishers claimed that it was based on extensive conversations with Castro and reflected his views.

The book stated that the political leadership of the revolution must be in the hands of the guerrilla chieftain, not in those of the Communist party. It explicitly denied the revolutionary character of both the pro-Soviet Communist parties and the pro-Chinese splinter groups operating in Latin America, and maintained that the revolutionary party itself would come into being only in the course of the guerrilla war or even after its victorious conclusion.

On April 16, Havana released the text of a message by Ernesto (Che) Guevara calling for guerrilla warfare on a continental scale in support of "heroic Vietnam." Guevara, former Cuban minister of industry, had disappeared from Cuba two years earlier and was rumored dead. His message was dated from "somewhere in the world"; it was not known at the time that he was in southeastern Bolivia, where guerrilla fighting had broken out in March. Also in April, the Bolivian government announced the capture of Régis Debray.

In October, the Castroite guerrillas in Bolivia were decisively defeated, and the Bolivian government announced the death of their leader, Guevara. On October 15, Castro confirmed that Guevara had been killed. The Cuban government honored his memory by a month of mourning, during which the national flag remained at half-mast. (See also BOLIVIA.)

Solidarity Conference. July 31 saw the opening in Havana of the first conference of the Latin American Solidarity Organization, which was attended by delegates of extreme leftist groups from all the Latin American states. Such issues as the possibilities and prospects of guerrilla warfare and the permissibility of eastern European Communist bloc economic aid to Latin American governments hostile to Cuba were hotly debated between the Castroites and pro-Soviet Communists.

The published resolutions of the conference reflected a compromise; a resolution condemning eastern European aid to the Latin American countries remained unpublished, though passed by a majority vote. But in summing up the results of the conference in a final speech on August 10, Castro remained intransigent. He declared that "nobody should harbor the illusion that power can be conquered by peaceful means in any country of this continent," and that "the least we can expect of any socialist country is that no financial or technical aid be given to those governments that suppress revolutionary movements."

Castro denounced the leaders of the Communist party of Venezuela as "a reactionary Mafia inserted into the Latin American revolutionary movement by Yankee imperialism." He also called on revolutionaries of all countries to "give maximum aid" to the U. S. Negro leader Stokely Carmichael, who had played a prominent role at the conference.

Relations with the USSR. On June 26, Soviet Premier Aleksei Kosygin arrived in Havana. The nature of his talks with Castro was not made public, but one month later, Castro, in a speech commemorating the abortive rising of July 26, 1953, warned the Cubans that in the event of U. S. attack on the island "we must be accustomed to the idea of fighting alone."

In November, Castro again demonstrated his dissatisfaction with Soviet policies by delegating a junior cabinet member, the minister of education, as his representative to the Moscow celebration of the 50th anniversary of the Russian Revolution.

Relations with the United States. Throughout the year Cuban propaganda continued to denounce the United States as the main enemy of the Latin Americans and of the entire human race. Castro's demonstrative support of Stokely Carmichael and the most radical wing of the Negro movement in the United States gave Washington reason for concern.

In December there was, however, some slight indication of a Cuban desire to lessen tension. The Cuban government permitted repatriation of U. S. citizens who had hitherto been held in Cuba against their will. The Havana-Miami airlift for Cubans wanting to leave the island continued in daily operation throughout the year. By Dec. 1, 1967, the total number of refugees from the Castro regime who had left their country by this airlift since its initiation on Dec. 1, 1965, stood at 89,549.

Domestic Policies. A "campaign against bureaucracy" initiated in January resulted in a drastic reduction of personnel in a number of ministries. Severe sanctions were applied against heads of enterprises and administrative bodies accused of hiring superfluous personnel. The campaign had ideological overtones. An editorial in the official newspaper *Granma* on February 28 stated that there was the danger in socialist countries of "bureaucratic positions becoming seats of accommodation, stagnation, or privilege."

The regime stepped up the organization of boarding schools on the primary and secondary levels. In a speech on January 29, Castro explained that the aim was "to organize the entire life of the children around the school. Thus they will not have time to acquire bad habits and will be mentally, physically, and socially well educated."

The organization of the Communist party of Cuba, which had hitherto been proceeding at a sluggish pace, made considerable progress during 1967. Thus in June, a party group was finally set up in the key ministry of the interior. The party now appears to be well on its way to becoming Castro's main instrument of rule. Provincial party organizations assumed public responsibility for bringing in the vitally important sugar harvest. At the end of 1967 about 40 "old guard" pro-Soviet Communists were purged from the party for opposing Castro's policies.

Economic Policy. In 1967, as in the four preceding years, emphasis in economic planning was on the development of agriculture instead of industry. The sugar crop of over 6 million tons was satisfactory, though still far from the target of 10 million tons set for 1970. The area of coffee cultivation was greatly expanded, and self-sufficiency in rice production was announced as within reach. Economic incentive (exemption from all taxation) was used in a major effort to reverse the population flow from the countryside to the cities.

On Jan. 2, 1968, Castro announced that petroleum—which is supplied by the Soviet Union—would be rationed in Cuba.

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CURRENCY. See Coin Collecting; International Finance.

CYCLING. See Sports.

CYPRUS

The threat of a war with Turkey dominated events on Cyprus in 1967.

The Question of Enosis. Among the Greek Cypriots, representing 80% of the population, there continued in 1967 to be a marked feeling for enosis (union) with Greece. This was vigorously opposed by the Turkish Cypriote minority, which received strong backing from the Turkish government. Early in the year, Archbishop Makarios III, president of Cyprus, reiterated that he was still in favor of enosis as the ultimate solution for Cyprus.

Following a military take-over of the Greek government on April 21, rumors circulated that Greece was planning a coup to overthrow Makarios. This was repudiated as defamatory by the Greek foreign minister. But rumors still persisted abroad that Makarios was heading for a rift with the Greek government and that an antiunionist group was developing among the Greek Cypriotes.

Obviously as a reaction to these reports, the Cypriote House of Representatives, composed entirely of Greek Cypriotes, voted unanimously that enosis was the wish of the Cypriotes. The desirability of union was also stressed by prominent Greeks who visited Cyprus. In August, Col. George Papadopoulos, one of the leaders of the April coup in Greece, stated on the island that the Greek government wanted full union without any limitations. The next month, Archbishop Ieronymos of Athens, primate of Greece, asserted in Nicosia that enosis was certain in the future. In October, Gen. Gregory Spandidakis, another of the Greek coup leaders, appeared on Cyprus and made clear his unionist sentiments. In addition, Gen. George Grivas, the defense chief of Cyprus, who was appointed by the Greek government, was strongly in favor of enosis.

Military Forces. Grivas controlled both the 10,000-man Cypriote National Guard and the Greek troops stationed on the island. These, according to agreements reached before Cyprus became independent in 1960, were to be limited to 950 men. Since 1963, however, when bitter fighting had broken out between Greek and Turkish Cypriotes, the number of Greek troops had been steadily increased until it was reported to stand somewhere between 6,000 and 10,000.

The Turkish government, which by the preindependence agreements was entitled to 650 troops on the island, had increased its forces to a strength estimated variously from 1,200 to 4,000. In addition, the United Nations maintained 4,500 troops and 150 policemen on Cyprus. The function of the UN personnel was to maintain neutral areas between the Greek and Turkish Cypriotes to prevent clashes.

Crisis and Negotiations. The Cyprus situation was the subject of personal meetings held by the Greek and Turkish premiers in September, but no accord was reached. Shortly thereafter the premier of Turkey, Süleyman Demirel, said that he did not foresee an early settlement for Cyprus, and he vehemently criticized Archbishop Makarios as irresponsible.

On November 15 and 16, 26 Turkish Cypriotes were killed at the villages of Ayios Theodoros and Kophinou while fighting against the Greek Cypriote National Guard, under Greek officers from Greece. The clash precipitated a Turkish threat of invasion against Cyprus, which would have undoubtedly led to a Greek-Turkish war. To calm the situation the Greek government recalled Grivas to Athens on November 18, but the Turkish government demanded more concessions.

On November 22, U. S. President Johnson sent a special envoy, Cyrus R. Vance, to Athens, Ankara, and Nicosia to help find an agreement between the Turks and the Greeks. Manlio Brosio, secretary general of the North Atlantic Treaty Organization, to which both Greece and Turkey belong, visited Athens and Ankara for the same purpose. UN Secretary General U Thant appealed for calm and sent his special representative, José Rolz-Bennett, to Nicosia, as well as to Athens and Ankara. The U. S. Department of State described the situation as very tense. Archbishop Makarios told the Greek Cypriotes to expect that Turkey might war on them.

WIDE WORLD

CYRUS VANCE (*center*), U. S. envoy, talks with President Makarios of Cyprus on Dec. 3, 1967. To help prevent a war over Cyprus, Vance also met with Greek and Turkish leaders.

After two weeks of intense negotiations, the Greek and Turkish governments announced that they would remove from Cyprus all their troops, except for those allowed by the preindependence agreements, and on December 8 the first contingent of Greek troops left Cyprus. They also agreed that the functions of the United Nations on the island should be increased. President Makarios seemed reluctant to give his approval to these terms, and although the war crisis had passed, the basic issue of political stability on the island had not been resolved.

Economy. Following Britain's lead in November, Cyprus devalued its currency 14.3%. The threat of war curtailed tourism, and the Turkish Cypriote areas were subject to a partial economic blockade so that they could not build up their military strength against the government.

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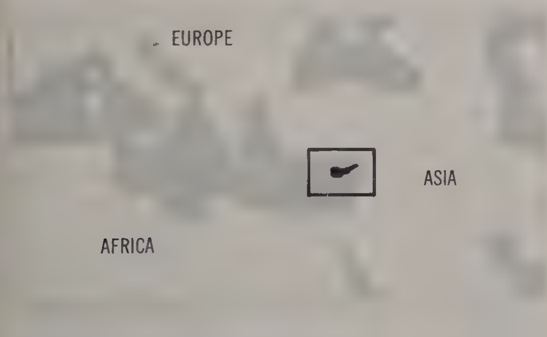
CYPRUS • Information Highlights



Area: 3,572 square miles (9,251 sq km).
Population: 610,000 (March 31, 1967 est.).
Chief Cities (1960 census): Nicosia, the capital, 47,000 (1964 est.); Limassol, 43,593; Famagusta, 34,774.
Government: *President*—Archbishop Makarios III (reelected to 2d 5-year term, July 23, 1965). *Parliament*—House of Representatives, 50 members.
Religious Faiths: Greek Orthodox, 79% of pop.; Muslims, 18%.
Education: *Literacy rate* (1960), 76% of population aged 15 and over. *Total school enrollment* (1964)—96,563 (primary, 69,218; secondary, 22,274; technical/vocational, 4,983).
Finance (1966 est.): *Revenues*, $55,400,000; *expenditures*, $55,200,000; *public debt* (1964), $40,000,000; *monetary unit*, pound (before devaluation, 0.3571 pound equaled U. S.$1; as of Nov. 20, 1967, 0.4166 pound equaled U. S.$1).
Gross National Product (1966): $440,000,000.
Economic Indexes (1966): *Industrial mining production*, 80 (1958=100); *cost of living*, 105 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 97,920; wine, 31,000; beer, 5,600; olive oil, 4,000.
Crops (metric tons, 1965): Grapes (1966), 127,000; citrus fruit, 97,000; olives (1966), 24,000.
Minerals (metric tons, 1965): Pyrites, 962,152; gypsum, 60,769; copper, 21,300; asbestos, 16,000; salt, 5,000.
Foreign Trade (1966): *Exports*, $81,872,000 (chief exports: copper, $25,500,000; citrus fruits, $11,200,000); *imports*, $158,508,000 (chief imports, 1965: nonelectrical machinery, $14,400,000; textile yarn and fabrics, $13,900,000). *Chief trading partner* (1965): Britain (took 30% of exports, supplied 33% of imports).
Transportation: *Roads* (1964), 24,820 miles (39,943 km); *motor vehicles* (1965), 41,734; *merchant vessels* (1966), 40 (259,000 registered tons).
Communications (1967): *Telephones*, 30,338; *television stations*, 2; *television sets*, 23,000; *radios* (1965), 130,000; *newspapers* (1965), 10.

CZECHOSLOVAKIA

The attention of Czechoslovakia's Communist regime was centered chiefly on two main issues in 1967: (1) the ever-widening differences between the Communist leadership and Czech writers, which ended in a head-on collision at midyear; and (2) the mounting difficulties encountered in gradually implementing the state's New Economic Model.

The Writer's Rebellion. After several years of recurrent feuding between Czech writers and the government over the issue of creative freedom, the writers used the occasion of their fourth congress on June 27–29, 1967, to unleash their most forceful attack to date on the regime's restrictive policies. They were especially concerned about the new Press Law, which had gone into effect on January 1, placing the press under direct government control and setting up a new Central Administration for Publications. In daring speeches and in the final resolution of the congress they denounced party censorship and other Communist-imposed restrictions in the fields of literature, culture, and even politics.

Shocked by the intensity of the writers' rebellion and fearful of the threat it posed to their monopoly of power, the party leaders moved quickly against the recalcitrants. On June 30, Czechoslovakia's president and top party leader, Antonín Novotný, condemned the rebellious writers for "preaching capitalist morals and bourgeois ideology." The most outspoken critics were expelled from the party. *Literární noviny*, the journal which served as the leading platform for liberal views, was taken away from the Writers' Union and placed under direct control of the ministry of culture and information.

Economy. On Jan. 1, 1967, Czechoslovakia's New Economic Model, conceived to make the nation's economy more efficient, went into operation. While some difficulties were expected to accompany the reforms, they proved greater than anticipated. The rate of economic growth—which registered, in 1966, an impressive 7.4% for industry, 10% for agriculture, and over 7% for national income—slowed down. In 1967, industrial production increased by only 6.1%, agriculture by 3.5%, and national income by 6–7%. But more serious were certain negative "tendencies" adversely affecting the basic purpose of the reform. These included lagging labor productivity coupled with economically unwarranted wage increases, and the poor quality and inadequate assortment of products, causing shortages of many items, excessive accumulation of unsalable merchandise, and a decline in exports to the West.

Other adverse factors were inflationary pressures due to insufficient supply and to attempts of certain enterprises to exploit their monopolistic positions; the extreme slowness in carrying out the highly desirable salary differentiation system set up to reward good workers and penalize incompetent ones; and slow progress in the replacement of unsatisfactory but politically loyal managers by persons with better economic ability.

Foreign Relations. As in previous years, Czechoslovakia persisted in 1967 in obediently following Soviet leadership in international affairs. At Soviet behest, the nation concluded treaties of friendship, cooperation, and mutual assistance with East Germany and Poland in March. The treaties were meant primarily to enhance East Germany's status. After the outbreak of the Israeli-Arab war, the Czechoslovak regime denounced Israel as the aggressor and broke off diplomatic relations.

On Aug. 4, 1967, Czechoslovakia took a significant step toward a normalization of Czechoslovak-German relations by concluding a 2-year trade and payments pact with West Germany and by exchanging permanent trade missions. On the other hand, Czechoslovakia's relations with Austria were strained in the summer of 1967 because of several violations of Austrian sovereignty by Czechoslovak frontier guards pursuing escapees from Czechoslovakia.

Party and Government. Nothing of significance occurred in 1967 in the Communist party. A minor reshuffle took place in the cabinet. The National Assembly adopted three major laws on national committees, commissions of people's control, and administrative procedure.

A power struggle within the party ended on Jan. 5, 1968, with the ouster of Novotný as party chief. He was succeeded by Alexander Dubček, a Slovak.

EDWARD TABORSKY
University of Texas

CZECHOSLOVAKIA • Information Highlights

Area: 49,370 square miles (127,869 sq km).
Population: 14,274,000 (Dec. 31, 1966, est.).
Chief Cities (1964 est.): Prague, the capital, 1,017,156; Brno, 325,332; Bratislava, 262,380; Ostrava, 255,703.
Government: *President*—Antonín Novotný (elected by the National Assembly, 1957); *Premier*—Jozef Lenárt (appointed 1963). *Parliament*—National Assembly, 300 members.
Religious Faiths: Roman Catholics, 64% of population; others, 36%.
Education: *Total school enrollment* (1964)—2,804,081 (primary, 2,240,844; secondary, 115,564; teacher-training, 10,327; technical, 295,700; higher, 141,646).
Finance (1966 est.): *Revenues*, $21,236,111; *expenditures*, $21,236,111; *monetary unit*, koruna (7.20 korunas equal U.S.$1).
Net Material Product (1965): $24,200,000,000.
Economic Indexes (1966): *Industrial production*, 173 (1958=100); *cost of living* (1965), 99 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 9,132,000; cement, 6,096,000; beer, 1,880,100; wheat flour, 1,308,000; sugar, 969,583; meat (1965), 913,000.
Crops (metric tons, 1966–67 crop year): Potatoes, 5,879,000; wheat, 2,300,000; barley (1967), 1,650,000; sugar beets, 959,000; rye, 784,000; oats (1967), 760,000.
Minerals (metric tons, 1965): Lignite (1966), 74,100,000; coal (1966), 26,868,000; lime, 2,488,000; iron ore (1966), 2,244,000; pyrites, 370,000; raw gypsum, 372,000; kaolin, 332,000; crude petroleum, 207,000; salt, 195,000.
Foreign Trade (1966): *Exports*, $2,745,000,000 (chief exports, 1965: machinery and equipment, $1,220,050,000; consumer goods, $415,220,000); *imports*, $2,729,000,000 (chief imports, 1965: machinery and equipment, $748,540,000; fuels, minerals, and metals, $688,610,000; nonedible organic raw materials, $311,740,000). *Chief trading partners* (1965): USSR (took 37% of exports, supplied 32% of imports); East Germany (took 10% of exports, supplied 10% of imports).
Transportation: *Highways and first-class roads* (1964), 45,256 miles (72,832 km); *motor vehicles* (1965), 572,000 (automobiles, 385,000); *railways* (1965), 8,313 miles (13,376 km); *national airline*, Czechoslovak Airlines; *principal airports*, Bratislava, Brno, Olomouc, Prague.
Communications: *Telephones* (1966): 1,491,621; *tv stations* (1965), 21; *tv sets* (1965), 2,240,000; *radios* (1965), 3,727,000; *newspapers* (1965); 27 (circ. 3,971,000).

DAHOMEY

Political unrest in Dahomey throughout 1967 culminated in a coup by army officers in December.

Politics. On December 17, young army officers, headed by Maj. Maurice Kouandété, overthrew the government of President Christophe Soglo in a bloodless coup. The officers were reinforced by the presence of key units of Dahomey's armed forces, which had been pulled into Cotonou and the nearby official capital of Porto-Novo to control a general work strike. On December 18, Major Kouandété formed a provisional government with himself as head of state and minister of defense. The government planned to hold elections in about six months.

Probably the primary cause of the coup was the existence in the army of traditional tensions between northerners and southerners. These tensions increased shortly before the coup, when Soglo, a southerner and former army commander, made tentative moves under pressure from army factions to reduce the power of Commander in Chief Alphonse Alley, a northerner. The leaders of the coup and most of the members of the new cabinet, including Kouandété, were northerners. Alley, however, remained loyal to Soglo, and was placed under detention.

Economy. General dissatisfaction with General Soglo's government stemmed from his failure to improve Dahomey's economy, which relies largely on direct French subsidy. In order to balance his budget, Soglo, in October 1966, imposed a 25% cut in workers' wages. Resentment at this and at a decree of Dec. 8, forbidding all union activities, led to a 5-day work stoppage during the week of December 11. The new government met with union leaders on December 20, and reached several agreements, including the decision to set up a commission to study ways of restoring the 25% wage reduction.

Heavy trade deficits and mediocre harvests further weakened Dahomey's economic condition in 1967. Aid agreements, besides the major ones with France, were reached with the U. S. Agency for International Development, Italy, and the United Nations.

Foreign Affairs. In 1967, Dahomey retained particularly close ties with France and the other Entente countries—Ivory Coast, Niger, and Upper Volta. In an economy measure, Dahomean embassies were closed in Nigeria, Ghana, and Congo (Kinshasa).

CLAUDE E. WELCH, JR.
State University of New York at Buffalo

DAHOMEY • Information Highlights

ASIA
AFRICA

Area: 43,483 square miles (112,622 sq km).
Population: 2,462,000 (Dec. 31, 1966 est.).
Chief Cities: Porto-Novo (1964 est.), the capital, 69,500; Cotonou (1964 municipal census), 109,328.
Government: Maurice Kouandété became head of government, Dec. 18, 1967. National Assembly (dissolved).
Religious Faiths: Tribal religions, 68% of population; Muslim, 15%; Roman Catholic, 14%; other, 3%.
Education: *Total school enrollment* (1964)—136,390 (primary 125,231; secondary, 10,083; teacher-training 354; technical, 683; higher, 39).
Finance (1967 est.): *Revenues*, $30,000,000; *expenditures*, $30,831,000; *monetary unit*, CFA franc (246.85 francs equal U. S.$1).
Manufacturing (1965): Lumber, 9,000 cubic meters; palm oil, 43,000 metric tons.
Crops (metric tons, 1964–65 crop year): Cassava, 1,052,000; sweet potatoes and yams, 574,000.
Foreign Trade (1966): *Exports*, $10,490,000 (chief exports, 1965: palm kernel oil, $3,988,000; palm oil, $3,003,000); *imports*, $33,453,000 (chief imports, 1965: woven cotton fabrics, $6,071,000; motor vehicles, $2,492,000; petroleum products, $1,856,000). *Chief trading partners* (1965): France (took 55% of exports, supplied 55% of imports); Netherlands (took 11% of exports, supplied 5% of imports).
Transportation: *Roads* (1965), 3,828 miles (6,160 km); *motor vehicles* (1965), 10,090 (automobiles, 5,946); *railways* (1964), 360 miles (579 km); *principal airport*, Cotonou.
Communications: *Telephones* (1966): 3,500; *radios* (1965), 35,000; *newspapers* (1964), 3 (daily circulation, 2,000).

DAIRY PRODUCTS

Dairy farmers in the United States produced about 120 billion pounds of milk in 1967, slightly less than they produced in 1966, according to preliminary estimates of the U. S. Department of Agriculture. The total is well below the record output of 127 billion in 1964.

Output per cow, which has been gaining annually since World War II, continued to increase in 1967. The average was estimated at 8,810 pounds, up about 3½% from the 1966 average (the previous high). Production per cow was nearly 66% larger than the 5,314 pounds of 1955. The 1967 increase per cow of 297 pounds was up from the previous year's gain of 209 pounds and above the 1957–66 average annual increase of 221 pounds.

The downward trend in the number of milk cows on farms, begun in 1945, continued in 1967, when the number of cows averaged about 13.6 million, or 4% below 1966. The milk cow population declined nearly 31% from 1957 to 1967.

Use of milk in commercial markets decreased by nearly 5 billion pounds in 1967 from 1966. The main reason for the decrease was record high prices received by farmers for their milk. Manufacturers sought milk substitutes such as coffee whiteners, imitation milk, mellorine, and margarine. Because consumption shrank while production declined only slightly, the Commodity Credit Corporation's purchases for price support were expected to rise to more than 7 billion pounds in 1967. This was up sharply from the 600 million pounds purchased in 1966, but still substantially below 1962's record purchases of 10.8 billion pounds.

Dairy products in commercial and government stocks swelled to more than 8 billion pounds of milk equivalent in 1967, up considerably from 4.8 billion pounds a year earlier. Civilian use of milk in 1967 was estimated to be about 2.5 billion pounds less than the 119.4 billion pounds consumed in 1966.

Use of milk per capita in all forms fell 20 pounds to 584 pounds. Consumption per person in the United States has declined almost every year since 1955.

World Production. According to preliminary estimates, milk production in the 35 countries that normally produce about 85% of the world's supply of milk increased about 2% in 1967. Output in these countries was estimated at 689 billion pounds, up

MILK PRODUCTION IN PRINCIPAL COUNTRIES
(In millions of pounds)

Country	Average 1956–60	1966	Preliminary 1967
Argentina	10,187	11,030	9,921
Australia	14,005	16,634	16,650
Austria	6,048	7,090	7,143
Belgium	8,320	8,823	8,853
Brazil	10,170	15,873	17,196
Britain	22,295	24,858	25,390
Canada	17,407	18,375	18,200
Czechoslovakia	8,298	8,708	8,818
Denmark	11,633	11,704	11,484
Finland	7,118	8,133	7,936
France	46,037	61,971	63,933
Germany, East	12,119	14,833	15,102
Germany, West	39,604	47,544	48,390
Ireland	5,973	7,111	7,571
Italy	19,580	21,031	21,000
Japan	3,380	7,527	7,892
Mexico	5,079	9,402	9,731
Netherlands	13,833	15,950	16,479
New Zealand	11,522	13,750	14,214
Poland	25,560	31,382	31,746
Rumania	5,578	5,897	6,173
Sweden	8,657	7,815	7,143
Switzerland	6,451	6,902	7,385
USSR	107,099	147,990	154,322
United States	123,500	120,230	120,200

from 676 billion pounds in 1966. The 1967 output was nearly 21% above the 1956–60 average of 570 billion pounds.

Milk production increased in nearly every country except Denmark, Italy, Finland, and Sweden. In France, Western Europe's largest milk producer, output rose 3%, resulting in large surpluses. South American output was about the same as in 1966.

JOE WESTERN
Kominus-Agri-Info Associates

DALEY, Richard J. See biographical sketch under CHICAGO.

DALLAS

Dallas, county seat and second largest city in Texas (1967 est. pop., 835,000), completed the final step in a program to integrate its public schools in the fall of 1967. Dallas voters approved a $175 million bond issue for an extensive capital improvements program, and the city's official metropolitan area was extended to include two additional counties.

Education. All senior high schools of the Dallas Independent School district became integrated (both faculty and students) in 1967, completing a district-wide all-school integration program begun in 1962 as a stair-step, grade-a-year plan. The program was accelerated in 1965 by orders of the U. S. Circuit Court of Appeals, which reduced the time limit for integration from 12 to 5 years.

Improvements and Expansion. On Aug. 8, 1967, the city voted in favor of a $175 million bond issue (the largest in the city's history) to finance a capital improvements program. It provides for construction of new municipal services buildings, expansion of the auditorium and convention center, regional airport land acquisition, public park and street improvements, and library construction.

In 1967 the U. S. Bureau of the Budget redefined the Dallas Standard Metropolitan Statistical Area to include two additional and adjacent counties, Kaufman and Rockwall, now considered within the urbanizing influence of the central city. Dallas is the economic center of what is now a six-county metropolitan area (4,637 sq mi; 1967 est. pop., 1,386,000).

New Construction. Major projects under construction in 1967 were the Army and Air Force Exchange Service Center; the long-delayed $26 million, 16-story federal office building; the $34 million North Toll road; and the 230-acre Southpark Shopping Center, which is to contain 3 million square feet and cost $65 million. Projects announced included a new $30 million post office center and a 200-bed, 8-story hospital in the Baylor University Medical Center. Extensive additions and improvements to Dallas' Love Field will be completed in 1968. The $25 million program is designed to serve air transportation needs until construction of the projected Dallas-Fort Worth regional airport.

Jack Ruby Case. Jack Ruby, who was awaiting retrial for the slaying of Lee Harvey Oswald (alleged assassin of President Kennedy), died in a Dallas hospital on Jan. 3, 1967.

Economy. Dallas leads the South in wholesale trade, is a major insurance and finance center, and is an international spot cotton market. Clothing manufacture, aircraft factories, automobile assemblies, and electronics and oil-well equipment plants are the principal industries. Manufacturing accounts for about one fourth of the employment in the metropolitan area, which totaled 622,600 in 1967. Unemployment averaged about 2.5% during the year, well below the national average. Dollar volume of residential construction authorized in 1967 was $159 million, or 49% above 1966; nonresidential construction authorized was $119 million, 1% below 1966.

Finance and Government. Finances for the fiscal year 1967–68 included a record city budget of $113,037,129 and a record school budget of $88,558,132; net debt: city, $259,884,000; schools, $103,901,188; assessed valuation for tax purposes: city, $3,315,265,313; schools, $3,101,507,394; tax rates per $100 of assessed valuation: city, $1.79; schools, $1.63. The city has a council-mayor government.

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UPI

DALLAS Mayor Erik Jonsson observes the fourth anniversary of President John F. Kennedy's death by placing a wreath at the site of the assassination.

CALIFORNIA STATE DEPARTMENT OF WATER RESOURCES

OROVILLE DAM, on the Feather River north of Sacramento, Calif., was topped out in 1967. The 770-foot-high dam is the world's highest earth- and rock-fill embankment.

DAMS

The 1967 supplement to the World Register of Dams, prepared by the International Commission on Large Dams, showed that there were 757 new dams over 50 feet (15 meters) high. The United States, with 298 of the total, led the world in building new dams. Japan was in second place with 91 dams, and India and South Africa tied for third with 32 dams each. The United States also led the world in the total volume of its new dams—484 million cubic yards (369 million cubic meters). Canada was second with a total volume of 149 million cubic yards (114 million cubic meters), and the Soviet Union was third with a total volume of 144 million cubic yards (110 million cubic meters).

Oroville Dam. The 770-foot-high (235 meters) Oroville Dam, north of Sacramento, Calif., the world's highest earth- and rock-fill embankment, was topped out in 1967, climaxing a 5-year construction effort that included around-the-clock work. The building of this dam entailed one of the greatest and fastest earthmoving projects in history. A total of 80.6 million cubic yards (61.6 million cubic meters) of fill was transported 12 miles to the dam site. There, the dam builders added 2.5 tons of fill material to the dam every second.

The $134 million dam, which is on the Feather River, is one of the most important elements in California's $2.8 billion State Water Project. It will create a reservoir with a capacity of 3.5 million acre-feet (4.5 billion cubic meters); water from the reservoir will be delivered to ever-thirsty southern California areas as far as 650 miles away.

Mossyrock Dam. With the completion of placing concrete in 1967, Tacoma City Light's new 605-foot-high (184 meters) dam on the Cowlitz River near Mossyrock, Wash., became the fifth highest dam in the United States and the 17th highest in the world. Construction of the spectacular double-curvature, thin-arch structure took less than three years. The project consumed 1.3 million cubic yards (1 million cubic meters) of concrete.

Boundary Dam. Workmen poured the last bucket of concrete into the 385-foot-high (117 meters) thin-arch Boundary Dam in 1967, thus topping out the dam on schedule. This structure is located on the Pend Oreille River in northeastern Washington.

Swift Dam. The Swift Dam, which was built to replace a dam destroyed by floods in 1964, was topped out in 1967. This dam in north-central Montana is the first nonsymmetrical, double-curvature, thin-arch concrete dam ever built by the Bureau of Reclamation. The Morrow Point Dam, a larger dam of similar design, is being constructed by the Bureau on the Gunnison River in Colorado.

Hells Canyon Dam. The Hells Canyon Dam, located on the Snake River between Idaho and Oregon, was also topped out in 1967. The dam was placed in a nearly 1-mile-deep (1.6 km) gorge, one of the steepest and deepest gorges in the United States. Because the temperature in the canyon reaches 110°F (43°C) in the summer, careful temperature control of the concrete was required both during and after placement.

Auburn Dam. During the summer, the Bureau of Reclamation announced the final plans for the world's largest single-arch dam—the $150 million Auburn Dam to be built on the American River in northern California. When completed in 1971, the structure, with a height of about 720 feet (220 meters), will be the fourth highest dam in the United States. Its crest length will be 3,500 feet (1,067 meters).

Portage Mountain Dam. In 1967 excavation was completed on the powerhouse cavern and the 10 penstocks of the Portage Mountain Dam, located on the Peace River in British Columbia. Toward the end of the construction season when the Canadian north turns bitterly cold, workers were on an around-the-clock schedule, seven days a week, racing to add the fill to raise the dam to its final height of 600 feet (183 meters).

Mica Dam. Construction began in 1967 on the 800-foot-high (244 meters), 2,600-foot-long (792 meters) earth-fill Mica Dam, located on the Columbia River in British Columbia. When completed in 1973, Mica Dam will be the 5th highest in the world and 18th largest in terms of volume.

Cahora Bassa Dam. After nine years of extensive surveys, the Portuguese began construction in 1967 of access roads and a bridge leading to the Cahora Bassa Dam site on the Zambezi River in Mozambique, an overseas province of Portugal located on the southeastern coast of Africa. Construction of the dam will cost $243 million; the plans also called for a powerhouse that will be able to produce 17 billion kilowatt-hours of electricity per year. The Cahora Bassa project is the biggest hydroelectric development in Africa and among the most important in the world. The dam, which has been nicknamed Narrow Dam because of its location within a steep gorge, is to be the cornerstone of economic development in Mozambique as well as the first step toward a common market power grid for southern Africa.

In erecting the Cahora Bassa Dam, the most trying task will be the race against the rains. Construction of the dry walls, the diversion galleries, and nearly half the 500-foot-high (152 meters) dam must be completed within six months; otherwise, the work will be washed away during the torrential rainy season and must be redone the following year. Construction of the dam project may begin at the close of the rainy season in May 1968.

Aswan High Dam. The Aswan High Dam, untouched by Israel in its swift military victory against Egypt in 1967, was more than 80% completed. The $1 billion dam is expected to be topped out before the Nile flood season in August 1968. The first of 12 hydroelectric turbines began to produce inexpensive power for Egypt toward the end of 1967, almost eight years after construction of the dam had commenced. Now far ahead of schedule, the dam had originally been planned for completion in 1970.

For a distance from either bank, the dam is as high as it will go—360 feet (110 meters) above the river bed; its crest is 2.5 miles (4 km) long and 0.5 mile (0.8 km) wide. When completed, this modern colossus of the Nile will have the bulk of 17 pyramids the size of Cheops at Giza.

Mangla Dam. United States contractors building Pakistan's huge Mangla Dam maintained their one-year lead over the original time schedule during 1967; the $400 million project is more than 95% complete. The dam, located on the Jhelum River, is a major element of the Indus River Basin project for redistributing the waters of the Indus River and its five major tributaries between Pakistan and India. The dam, an earth-fill type 380 feet (116 meters) high, has a crest length of more than 2 miles (3.2 km).

Tarbela Dam. Bids were invited in 1967 for the construction of another dam in the Indus Basin Development project, the $546 million Tarbela Dam. The earth- and rock-fill structure will stand 485 feet (781 km) high and will be 9,000 feet (14,484 km) long. When completed in eight years, it will be the world's largest embankment dam, with a total volume of 160 million cubic yards (122 million cubic meters).

Soviet Union. Dams were even part of the Soviet Union's 1967 jubilee marking the 50th anniversary of the Russian Revolution. At the $500 million Krasnoyarsk Dam on the Yenisei River in Siberia, the world's largest hydroelectric generator began producing power in November for the first time, an event timed to spotlight the country's technological advances since 1917. Also in November 1967, the world's first large and almost totally precast concrete dam, the Saratov Dam on the Volga River, began producing electric power in observance of the 50th anniversary.

STANLEY KLEIN
Regional Editor, "Machine Design"

NOVOSTI, FROM SOVFOTO

FLOOD WATERS surge through vents in the Krasnoyarsk Dam on the Yenisei River in Siberia. Floods caused by heavy June rains temporarily halted work on the dam, which was nevertheless able to begin producing hydroelectric power for the Soviet Union in November.

FRED FEHL

JEWELS highlighted the New York City Ballet's spring 1967 season. (*Left to right*) Francisco Moncion, Mimi Paul, Violette Verdy, and Conrad Ludlow in "Emeralds."

DANCE

Ballet, which has been capturing more public interest every year, was being challenged in 1967 by nontraditional forms of dance in a rivalry for new horizons and new audiences. Provocative titles and theatrical innovations helped to pique audience curiosity.

Nontraditional Dance. Many avant-garde choreographers gave their new works unusual titles, a hint of novelties to follow. For example, dancer-choreographer Kenneth King named one of his 1967 offerings *Print-Out, Cele(cere)brations: PROBELems & SOULutions fir the dyEYEing: KING.* Another was called *m-o-o-n-b-r-a-i-n with Super Lecture.* Other choreographers in avant-garde centers, such as the Judson Dance Theater, the Bridge Theater, and the Dance Theater Workshop (all in New York City), came up with *God Save our Tis of Thee* (Deborah Jowitt), *Parsley All Over the World* (Jack Moore), *Take Your Alligator With You* (Rudy Perez), *17 Millimeter Earrings* and *Duet with Cat's Scream and Locomotive* (both by Meredith Monk), and *Up to 7 Juxtaposed, And* (Carol Ritter).

"RUBIES," another part of George Balanchine's new ballet *Jewels,* featured Patricia McBride and Edward Villella.

FRED FEHL

BALANCHINE'S *JEWELS* also included "Diamonds," here danced by Suzanne Farrell and Jacques d'Amboise.

FRED FEHL

UPI

PARADISE LOST, a new ballet by Roland Petit, was performed during the 1967 American tour of England's Royal Ballet. Dame Margot Fonteyn and Rudolf Nureyev, shown in a practice session, danced the leading roles.

Some general tendencies among works of this genre were extensive use of specially made film sequences and electronic sound; long stretches in which performers simply stood or sat and stared at the audience; the use of childlike props (crumpled crepe paper, toy balloons, colored streamers), some of which were shared with or tossed at the audience; and a fair amount of disrobing. The trend seemed to be away from dancing, if one thinks of dancing as ordered rhythmic movement through space.

Disrobing took its most intricately staged form in *Parades and Changes*, created for the Dancers' Workshop of San Francisco by its director, Ann Halprin. The company's New York debut caused the local police to refuse them reentry. However, the "evidence" against the company, merely one section of a long, intensely performed work, was more cathartic than narcissistic in motivation.

New Ballets. A fresh choreographic talent is always eagerly awaited. In the spring, Eliot Feld, a dancer with The American Ballet Theatre, premiered *Harbinger* (with music by Sergei Prokofiev), a fluent, youthfully playful work that prompted one reviewer to comment, "It is not just a good first ballet. It is a good ballet—period."

In the autumn, Feld came up with his second ballet, *At Midnight*, danced to a series of Mahler songs. The sequence of the songs was tastefully rearranged to suit the theme—hopelessness gradually giving way to hope. *At Midnight* indicated that Feld, whether serious or playful, can make each dance phrase flow naturally out of what preceded. The ballet was a triumph, thus giving the United States its first new choreographer of major stature since Jerome Robbins.

Several other ballets of lasting significance poked their heads through the practical concerns that beset the dance world, like flowers through cracks in the pavement. The most modest, and perhaps the most endearing, was Sir Frederick Ashton's *Monotones* (to music of Eric Satie) seen during the Royal Ballet's spring tour. The simply clad work had a philosophic mellowness that again showed Ashton to be one of the finest lyric choreographers of our time. Another new offering brought to the United States by the Royal Ballet was French choreographer Roland Petit's *Paradise Lost*. Dame Margot Fonteyn and Rudolf Nureyev brought their own brand of depth and intimacy to the pop art antics of this flashy, yet strangely provocative, version of the Adam and Eve story.

George Balanchine, the New York City Ballet's artistic director, proved once more that he has trained his audiences to follow him wherever he wishes to go. For the company's spring season he produced an evening-long, nonthematic ballet called *Jewels*. With emeralds, rubies, and diamonds as his inspiration, Balanchine seemed to probe to the core of each gem and to find the perfect evocation of its individuality. So well received was the ballet that when it was announced for the company's fall season, all performances were promptly sold out.

Harkness Ballet. The 3-year-old Harkness Ballet, after many changes in managerial personnel, selected Canadian choreographer Brian Macdonald as its artistic director. An intense warm-up period at Clewes Hall in Indianapolis preceded the company's New York debut in November. Although its home and school are in New York, the company had never performed there. It presented an ambitious repertory of 18 ballets by contemporary choreographers, but in most cases the dancers proved more interesting than their material. The principal choreographers were John Butler (*After Eden, Landscape for Lovers, Sebastian,* and *A Season in Hell*) and Macdonald (*Tchaikovsky, Firebird, Time out of Mind, Zealous Variations,* and *Canto Indo*). The most deeply felt, and the most warmly received ballet, was *Monument for a Dead Boy*, by the Dutch choreographer Rudi Van Dantzig.

No expense was spared in mounting the ballets; Macdonald's *Firebird* reputedly cost $100,000 for the gilded and bejeweled sets and costumes by Rouben Ter-Arutunian. The company's benefactress, Rebekah Harkness, also subsidized the 6-performance subscription season of contemporary dance at the Hunter College Playhouse and the free summer dance series in Central Park.

Awards, Grants, and Fund Raising. It was another year of concern with financial problems, grants, and fund raising for most dance companies.

Modest, but sometimes very pervasive in their community effect, were the grants made by the National Endowment for the Arts and Humanities. The most substantial grant ($21,000) went to veteran dancer-choreographer Martha Graham to stage a new work and to revive three others. Small grants of $5,000 or less went to the Atlanta Civic Ballet, the Dayton Civic Ballet, the Ballet Guild of Cleveland, the San Diego Ballet, the Pennsylvania Ballet, the National Ballet of Washington, D.C., the Laguna Beach Civic Ballet, the Sacramento Ballet, the Garden State Ballet of Newark, N. J., and the State Ballet of Rhode Island. In general, these grants were intended to help the companies commission new works, to expand their performing schedules, and enhance their local prestige (and consequently their fund-raising potential).

One of the most imaginative examples of private financing of ballet was seen in Boston, where the Wasemequia Charitable Trust sponsored a summer Vestris Prize Contest for young choreographers. The dancers of the Boston Ballet performed the works of the semifinalists who were chosen in the preliminary round of judging. From these performances three winners were selected, with first prize going to Gyles Fontaine of Washington, D. C. The project was so successful that a second contest was planned for 1968.

State funds were used to aid the dance in Louisiana, Oklahoma, and North Carolina. In Louisiana the state arts council sponsored a summer conference, for which Birmingham choreographer Richard Englund was invited to stage a new ballet simultaneously for five Louisiana groups, who then had the privilege of performing it in their own communities during the year. In Oklahoma the state arts council contributed a substantial sum to an Indian Ballerina Festival. Two performances, one in Tulsa and one in Oklahoma City, were given. Marjorie Tallchief (Osage), Rosella Hightower (Choctaw), Moscelyne Larkin (Shawnee), and Yvonne Chouteau (Cherokee) danced *The Four Moons* to a specially commissioned score by Indian composer Louis Ballard. The North Carolina Arts Council sponsored a week-long tour of public schools by the dance students of the North Carolina School of the Arts. The reaction was so positive that additional funds were promptly allocated for a second tour.

Summer Festivals. Dance teaching around the country was improving. The positive effects were apparent in the two major dance schools at Connecticut College and at Jacob's Pillow in Lee, Massachusetts. But the summer festivals of professional dance held at both places were less impressive. It was the 20th anniversary of the Connecticut College American Dance Festival, and there were new works by José Limón, Ruth Currier, Lucas Hoving, and Merce Cunningham. Only Cunningham's *Scramble,* with its sprightly exterior and serene interior, gave one the feeling that a 20th anniversary could be made of more than nostalgia.

Broadway. It was a lean year in the mass media, although Gillian Lynne's dances for *Half a Sixpence* and Herbert Ross' for *Funny Girl* and *Dr. Dolittle* promised much for dance in films to be released at year's end.

Doris Hering
Associate Editor, "Dance Magazine"

DEATH RATES

The death rate in the United States, which had remained virtually level throughout 1964 and 1965, moved upward slightly in 1966. There were about 954 deaths per 100,000 population in 1966, an increase of 11 per 100,000 over the preceding year. Total deaths in the nation in 1966 were estimated at 1,869,000, or 41,000 more than in the preceding year.

Main Causes of Death. Diseases of the heart accounted for 39.3% of the deaths in the United States in 1966. The other leading causes were cancer (16.2%), strokes (11%), and accidents (6%).

Rates for the four leading causes have not changed greatly in the last decade, but some of their components have changed considerably. Arteriosclerotic heart disease, including coronary disease—which accounts for over three fourths of all deaths from diseases of the heart—has increased by more than 10% in this period.

The death rate from cancer of the respiratory system has increased by nearly 40%. Since 1961 the death rate from motor vehicle accidents has increased by about 30%, while the rate for other accidental deaths has remained about the same

LEADING CAUSES OF DEATH IN U.S., 1966

Rank	Cause of death	Number (estimated)	Death rate per 100,000 population[1]
1	Diseases of heart	734,710	375.1
2	Cancer (malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues)	303,300	154.8
3	Strokes (vascular lesions affecting central nervous system	204,810	104.6
4	Accidents	112,300	57.3
	Motor vehicle accidents	53,280	27.2
	Other accidents	59,020	30.1
5	Influenza and pneumonia, except pneumonia of newborn	64,230	32.8
6	Diseases of early infancy	51,170	26.1
7	General arteriosclerosis	38,280	19.5
8	Diabetes mellitus	35,380	18.1
9	Other bronchopulmonic diseases	28,740	14.7
10	Other diseases of circulatory system	28,280	14.4
	All other causes	268,100	136.7
	All causes	1,869,000	954.2

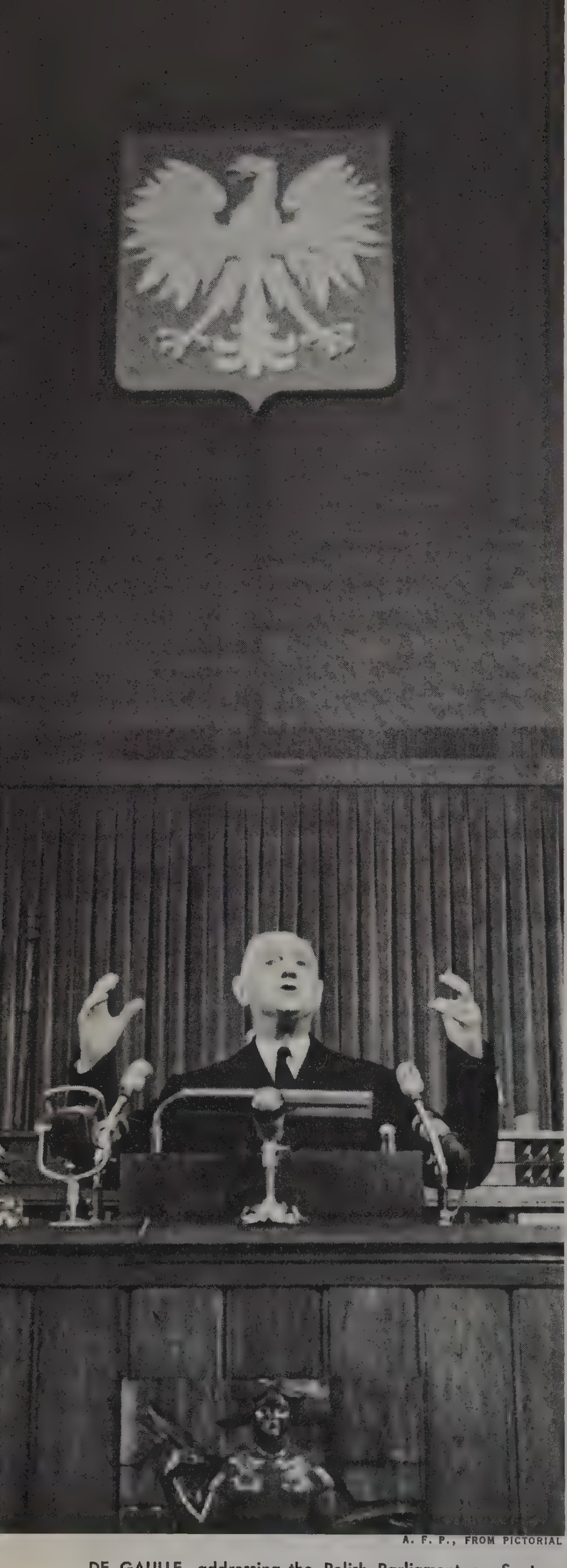
[1] Estimated death rates are based on a 10% sample of deaths. Causes of death are ranked on the basis of the U.S. Public Health Service list of 60 selected causes.

Motor Vehicle Deaths. The death rate for motor vehicle accidents rose in 1966 for the fifth year in a row. The rate was 27.2 motor fatalities per 100,000 population, compared with the 1965 rate of 25.2. The all-time peak in death rates from motor accidents, however, was reached in 1941, when the rate was 30 deaths per 100,000. (See also Accidents and Disasters.)

Infant Deaths. Infant deaths have made up a steadily dwindling percentage of total deaths since the country's peak fertility year of 1957. Infant deaths constituted 6.9% of all U. S. deaths in 1957, but they decreased to 4.5% of the total mortality in 1966. The number of infant deaths per 1,000 live births has declined sharply—from 26.3 in 1957 to 23.4 in 1966.

Average Remaining Lifetime. Statisticians calculate that an American child in his first year of life has an average remaining lifetime of 70.1 years. For a person who has reached the 70-to-75 age bracket, the average remaining lifetime is calculated at 11.6 years. And it is expected that a person 85 years old will live, on the average, 4.7 more years.

National Center for Health Statistics
Public Health Service



A. F. P., FROM PICTORIAL

DE GAULLE, addressing the Polish Parliament on September 11, stressed Franco-Polish ties and reaffirmed French recognition of Poland's claim to its present German border.

DE GAULLE, Charles

President of France: b. Lille, France, Nov. 22, 1890.

President de Gaulle told the French people that the Fifth Republic was at stake in the elections to the National Assembly, March 5 and 12, 1967. What he needed, and barely got, was continued majority support for his government. Denouncing his opponents as desiring totalitarianism (the Communists) or parliamentary omnipotence (the non-Communist left and other non-Gaullists), he derided "Moscow's devotees" and "those nostalgic for Washington." The uncertain Gaullist coalition narrowly defeated "the supporters of the old regime."

Domestic Program. Reshaping the cabinet, again headed by Premier Georges Pompidou, the president shifted portfolios, dropped some who had not performed well, and brought in new men or former ministers. But he retained some (such as Maurice Couve de Murville, minister of foreign affairs, and Pierre Messmer, Armed Forces minister) who, though defeated at the polls, were skillful defenders and executants of his policies. Despite a weak parliamentary situation, political protest, and massive strikes across the nation, he got special powers from the Assembly in June (provided for in the constitution) to deal with economic, financial, and social legislation free from parliamentary interference for six months. With an economy still slowed and business and working classes critical of the regime, de Gaulle, without denying the obstacles, predicted the coming of the good society.

Foreign Policy. The inspiration of de Gaulle's foreign policy was an intense desire to curtail the power of the United States. Before the April 1, 1967, deadline he had set in 1966, NATO's forces departed French soil, and he announced recovery of France's "independence." He continued to oppose discussion of Britain's application for membership in the Common Market, and he deplored the role of U. S. industry and money in Europe. He effected closer relations with the Bonn Republic, favored German reunification, provided for eventual Franco-German defense coordination, and simultaneously wooed the Poles (unsuccessfully) by recognizing the Oder-Neisse frontier.

De Gaulle's relations with Washington continued to be icy. His words with President Johnson at Konrad Adenauer's funeral in Bonn on April 25 were brief, and his condemnation of American action in Vietnam was uncompromising. By contrast, in the spring he took pains to talk twice with Premier Kosygin, who was passing through Paris to and from New York.

De Gaulle's grand design was, as before, to unite Europe loosely and free it of both Russian and American hegemony. In addition, he sought to play the honest broker in the Middle East, denying special friendship to Israel and refusing to recognize its territorial gains in the Israeli-Arab war in June.

Travels. In his most spectacular international move of the year, de Gaulle visited Quebec in July, hailed "New France," and, amidst great adulation, shouted extremist French-Canadian separatist slogans in his public addresses. The Canadian government reprimanded him, whereupon he abruptly returned to Paris, reasserted his position, and promised assistance to "emerging" Quebec.

Touring the cities and provinces of Poland in

September, de Gaulle stressed historic Franco-Polish ties. He urged his hosts to be freer of Soviet influence, but the Polish government publicly rejected the idea before de Gaulle left Warsaw.

Background. De Gaulle had a traditional, if distinguished, military career from 1912 to 1940, marked by appeals for a professional army and mechanized forces. Shortly before the collapse of France in World War II, Premier Reynaud brought him into the government. Refusing to accept Marshal Pétain's decision to seek an armistice, de Gaulle established himself in London as leader of the Free French forces. He returned to France and to supreme authority in 1944, but abandoned office in January 1946 rather than accept the reviving political system.

During the grave military and political crisis over Algeria in 1958, de Gaulle was recalled to power. Imposing a new constitution by referendum, he was elected first president of the Fifth Republic later that year. He succeeded in settling the war raging in Algeria by the summer of 1962. He transformed France's remaining colonial empire into a loosely associated community, and in 1962 he revised the constitution to make the presidential office popularly elected.

(See also CANADA; FRANCE; QUEBEC.)

JOHN C. CAIRNS
University of Toronto

DE JONG, Petrus J. S. See biographical sketch under NETHERLANDS.

DELAWARE

Reapportionment of the state legislative districts and an open housing bill were major questions facing the 1967 session of Delaware's General Assembly. Proposals for reorganizing the public school system were a major concern of local communities.

Legislation. The apportionment scheme used in the 1966 elections to Delaware's Senate and House of Representatives was overturned in January by a U. S. district court ruling. In those races the Democrats lost control of the House and won only half of the Senate seats. A long legislative struggle in 1967 produced an agreement to use special federal census data for a new apportionment before 1968, when all seats will again be up for election.

An open housing bill passed the House but was defeated in June by a closely divided Senate. The bill was so mild that it was opposed by the NAACP (National Association for the Advancement of Colored People).

Democratic Reorganization. Following disastrous reversals in 1966, upstate Democrats have established a permanent staff, an advisory council, and a discussion forum under new state and county chairmen. The officers are Alexis du Pont Bayard, a former lieutenant governor, and Harold Bockman, a former speaker of the state House of Representatives.

New Castle County Government. New Castle, the most populous by far of Delaware's three counties, made progress under the new form of government (county executive and county council) adopted for it by the General Assembly in 1965. The executive and the council members elected in 1966 have been installed, as have directors of budget, personnel, police, and public works. A merit system covering most employees has gone into effect. Matters of zoning, drainage, sewage, and garbage disposal were under consideration in 1967.

DELAWARE • Information Highlights

Area: 2,057 square miles (5,328 sq km).
Population: 523,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Dover, the capital, 12,000; Wilmington, 92,500; Newark, 13,800; Claymont, 12,500; Elsmere, 7,300; Milford, 5,800; New Castle, 4,500; Seaford, 4,400.
Government: *Chief Officers*—governor, Charles L. Terry, Jr. (Democrat); lt. gov., Sherman W. Tribbitt (D); secy. of state, Elisha C. Dukes (D); atty. gen., David P. Buckson (R); treas., Daniel J. Ross; supt. of pub. instr., George Madden; chief justice, Daniel F. Wolcott. *Legislature*—General Assembly (convened Jan. 3, 1967): Senate, 18 members (9 Republicans, 9 Democrats); House of Representatives, 35 members (23 R, 12 D).
Education: *School enrollment* (1965–66)—public elementary, 65,000 pupils (2,420 teachers); public secondary, 49,000 pupils (2,300 teachers); nonpublic schools, 21,400 pupils (770 teachers); college and university (fall 1965), 13,167 students. *Public school expenditures* (1965–66)—$56,000,000 ($548 per pupil); average teacher's salary, $7,082.
Public Finance (fiscal year 1967): *Revenues*, $314,907,526 (personal, corporation income, and all other, $126,182,847; motor fuel tax, $15,581,031; federal funds, $130,637,867). *Expenditures*, $311,281,529 (education, $115,834,238; health, welfare, and safety, $29,941,485; highways, $39,943,363). *State debt*, $270,239,442 (June 30, 1967).
Personal Income (1966): $1,811,000,000; average annual income per person, $3,529.
Public Assistance (fiscal year 1967): $7,968,768 to 18,627 recipients (aged, $1,271,621; dependent children, $5,014,801).
Labor Force (employed persons, Aug. 16, 1967): *Agricultural*, 13,500; *nonagricultural* (wage and salary earners), 217,900 (32.4% manufacturing, 17.9% trade, 12.3% government). *Unemployed persons* (Aug. 16, 1967)—10,600.
Manufacturing (1965): Value added by manufacture, $889,614,000 (textile mill products, $12,749,000; primary metals, $22,273,000; nonelectrical machinery, $14,624,000; electrical machinery, $8,629,000; fabricated metals (1963), $20,768,000; food and products, $130,617,000).
Agriculture (1966): *Cash farm income*, $129,993,000 (livestock, $90,868,000; crops, $37,320,000; govt. payments, $1,805,000). *Chief crops* (tons)—corn for grain, 222,376; potatoes, 79,550; hay, 63,000; soybeans, 47,712; wheat, 21,000; barley, 17,952; rye, 5,544.
Mining (1966): *Production value*, $1,980,000. *Chief minerals* (tons)—sand and gravel, 1,610,000; stone, 210,000; clays, 11,000.
Fisheries (1965): *Commercial catch*, 48,049,000 pounds ($909,000). *Leading species*—menhaden, 46,497,400 pounds ($579,213); hard blue crabs, 545,600 pounds ($42,436); clams, 363,400 pounds ($184,397); shad, 109,900 pounds ($16,042).
Transportation: *Roads* (1967), 4,338.9 miles (6,983 km); *motor vehicles* (1967), 254,000; *railroads* (1967), 340 track miles (547 km); *airports with scheduled service* (1967), 1.
Communications (1967): *Telephones* (1966), 281,100; *television stations*, 1; *radio stations*, 12; *newspapers*, 3 (daily circulation, 147,988).

Civil Disorders. Disorders broke out in a Negro section of Wilmington on July 28. There was little property damage, but some 170 policemen, with 1,500 National Guardsmen standing by, made 250 arrests for disorderly conduct, looting, and curfew and rioting violations. Seven injuries from gunshot were reported. State and city officials passed strict riot-control measures, and order was restored by August 8. A governor's committee, meeting six weeks later, made almost 100 recommendations involving job opportunities, housing, recreational and educational facilities, sanitation, and police pressure.

Public Education. During the year a governor's committee, chaired by Chief Justice Daniel F. Wolcott, held well-attended hearings around the state on controversial proposals to consolidate 48 school districts into 11. Following these hearings, an advisory committee of the state board of education proposed an $8 million, 22-district plan to be implemented through the board. Wilmington responded with a study recommending the closing of two traditionally all-Negro schools and the formation of an integrated school system for all of New Castle County.

A public junior college, Delaware Technical and Community College, opened at Georgetown in the fall.

FREDERICK J. ROBERTS
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DEMOCRATIC PARTY. See POLITICAL PARTIES.

PRINCESS MARGRETHE and Count Henri de Monpezat appeared on the balcony of the palace in Copenhagen after their wedding, June 10.

PICTORIAL PARADE

DENMARK

The marriage of Crown Princess Margrethe was celebrated on June 10, 1967, with festivities that also honored the 800th anniversary of the founding of Copenhagen. Other major events of the year were the enactment of tax-reform measures, the application for membership in the European Economic Community (Common Market), the labor agreement, and the fall on December 15 of Prime Minister Krag's Social Democratic minority government as a consequence of devaluation of the British pound and the Danish krone.

Politics and Legislation. The elections to the Folketing (parliament) in November 1966, which were called suddenly by Prime Minister Jens Otto Krag after he had met strong opposition over proposed tax reforms, resulted in a socialistic majority and several changes in the cabinet. In the first change, made soon after the election, Prime Minister Krag assumed the foreign ministry from Per Haekkerup and assigned Haekkerup to lead the Social Democrats in the Folketing. The most significant of the other changes were the naming of Hans Tabor, formerly Danish permanent ambassador to the United Nations, as foreign minister, effective October 2, and the ouster of Tyge Dahlgaard as minister for foreign trade because of his conflict with Krag on trade problems. Otto R. Borch succeeded Tabor at the UN.

An agreement with the Socialist People's party on several issues led to easy passage of the budget and of the tax reforms, which created a new tax system with increases in the sales tax and profits tax and adoption of a process tax. Pressures from the left wing in the Folketing resulted in increases in the lower limits on incomes for tax purposes and in the minimum child-care payments.

Economy. The persistence of inflation and the slow growth in production presented difficulties for the Danish economy, but the labor agreement of March, which included a wage increase to become effective on Jan. 1, 1968, seemed to guarantee industrial peace for another three years. Then, on November 18, came the announcement of the 14.3% devaluation of the British pound. To protect its chief exports—agricultural products, half of which

DENMARK • Information Highlights

Area: 16,614 square miles (43,031 sq km).
Population: 4,797,000 (1966 midyear est.).
Chief Cities (1964 est.): Copenhagen, the capital, 694,479; Aarhus, 118,945; Frederiksberg, 112,211; Odense, 109,681.
Government: *King*—Frederick IX (b. 1899; acceded 1947); *Prime Minister*—Jens Otto Krag (took office for 3d term Nov. 28, 1966). *Parliament*—Folketing, 179 members (party seating, 1966: Social Democratic, 69; Liberal (Agrarian), 35; Conservative, 34; Socialist People's party, 20; Radical Liberal, 13; Liberal Center, 4; Faeroe Islands representatives, 2; Greenland representatives, 2).
Religious Faiths: Lutherans, 96% of the population; others, 4%.
Education: *Literacy rate*, 99% of population. *Total school enrollment* (1964)—877,631 (primary, 520,666; secondary, 153,748; technical, 159,336; higher, 43,731).
Finance (1966 est.): *Revenues*, $2,307,000,000; *expenditures*, $2,088,000,000; *public debt* (1965), $866,000,000; *monetary unit*, krone (6.916 kroner equal U. S.$1; as of Nov. 21, 1967, 7.50 kroner equal U. S.$1).
Gross National Product (1966): $11,087,000,000.
Economic Indexes (1966): *Industrial production*, 173 (1958=100); *agricultural production*, 119 (1956–57=100); *cost of living* 142 (1958=100).
Manufacturing (metric tons, 1966): cement, 2,028,000; meat, 1,050,000; gasoline (1965), 852,000; beer (1964), 505,700.
Crops (metric tons, 1966–67 crop year): barley, 4,141,000; sugar beets, 2,300,000; potatoes, 930,000.
Minerals (metric tons, 1965): coal, 1,400,000; lime, 570,000; diatomaceous materials, 200,000; iron ore, 65,000.
Foreign Trade (1966): *Exports*, $2,456,000,000 (chief exports, manufactured goods, $958,000,000; bacon, $262,020,000); *imports*, $3,005,000,000 (chief imports, 1965: nonelectrical machinery, $293,000,000; transport equipment, $262,000,000). *Chief trading partners* (1965): West Germany (took 16% of exports, supplied 21% of imports); Britain (took 21% of exports, supplied 13% of imports).
Transportation: *Roads* (1964), 37,344 miles (60,098 km); *motor vehicles* (1965), 981,084 (automobiles, 744,416); *railways* (1965), 2,476 miles (3,984 km); *merchant vessels* (1966), 342 (2,641,000 gross registered tons); *national airline*, Scandinavian Airline System (SAS).
Communications: *Telephones* (1966), 1,363.988; *television stations* (1965), 17; *television sets* (1965), 1,084,000; *radios* (1965), 1,587,000; *newspapers* (1965), 67.

go to Britain—Denmark was forced on November 21 to devalue the krone by 7.9%. And to safeguard the benefits of devaluation, Prime Minister Krag called for legislation blocking the wage increase. When the bill was rejected on December 15 by a vote of 92 to 85, Krag resigned immediately and called for new elections on Jan. 23, 1968. In those elections the Social Democrats were defeated by a coalition of three non-Socialist parties. Hilmar Baunsgaard, leader of the Radical Liberals, was named prime minister on February 1.

Denmark's foreign trade in the first half of 1967 showed a deficit, but slightly less than that of 1966. The gross national product declined in the first half of the year, but economic activity showed an upswing during the summer.

Foreign Policy. The major Danish concern in 1967 was membership in the European Economic Community, for which application was made in May. The final spring session of the Folketing argued this move fully. It also discussed at length demands for sanctions against the military regime in Greece and against Rhodesia, and a resolution on the Vietnam War. When war broke out between Israel and the United Arab Republic in June, the cabinet and foreign policy committee met in a special session to define Denmark's stand.

Royal Family Weddings. The marriage of Crown Princess Margrethe to Count Henri de Monpezat of France, who became Prince Henrik of Denmark, was celebrated on June 10 with great pomp, to the ovations of a pleased Danish people. Announcement on June 4 of the engagement of Princess Benedikte to Prince Richard Casimir zu Sayn-Wittgenstein was also received with pleasure. The marriage was held on Feb. 3, 1968.

RAYMOND L. LINDGREN
California State College International Programs
Uppsala, Sweden

DENTISTRY

In addition to developing new diagnostic and treatment procedures during 1967, the dental profession continued to devote its attention to the rising demand for dental care, the professional resources available to meet this demand, and the costs of dental care.

Manpower. There are about 100,000 professionally active dentists in the United States today, about 1 dentist per 2,000 people. Estimates of population growth for the period from 1967 to 1975 indicate that this ratio will remain the same at least until 1975, despite the efforts of universities to build new dental schools and to enlarge existing ones. This prediction is not at all a favorable one, especially since the demand for dental care is continuing to rise rapidly.

To be able to provide the dental services needed in the years ahead, the dental profession took further measures to expand the functions of dental hygienists and dental assistants, thus increasing the output of the dentist. Various research studies indicate that dental auxiliaries can be trained to perform many of the duties now done by the dentist, including the insertion of filling material into a cavity and the changing of a surgical dressing.

Detection of Oral Cancer. Each year about 25,000 persons develop cancer of the mouth or lips, and about 7,000 die from the disease. In 1967 the American Dental Association, in cooperation with the American Cancer Society, increased its efforts to promote early diagnosis and treatment of oral cancer. One of the diagnostic techniques that gained increased acceptance by dentists during 1967 is the oral cytological smear that is treated with the Papanicolaou stain to reveal cancerous or precancerous cells. This smear technique is identical to that used by physicians for the early detection of cancer of the uterine cervix.

Dental Decay. In 1967 more than 72 million persons were served by fluoridated water supplies, an increase of about 26 million since 1957. Although water fluoridation continues to be the single most effective means of preventing dental caries in children, several research groups have reported other promising developments. Joseph C. Muhler and his coworkers at the University of Indiana reported that the enrichment of dry breakfast cereals with 1% sodium dihydrogen phosphate reduced the incidence of dental caries from 20% to 40% in children who regularly consumed the cereals over a 2-year period. Sidney B. Finn and Homer C. Jamison of the University of Alabama announced that dicalcium phosphate, when added to ordinary chewing gum, also helps prevent dental caries. At the National Institute for Dental Research, Harold England and his colleagues demonstrated the decay-preventing effects of fluoride gels when applied daily to the teeth of schoolchildren.

For years researchers have sought a chemical agent that would coat the teeth and make them impervious to the microbial by-products that cause dental caries. Michael Buonocore of the Eastman Dental Center came closest to this goal in 1967. Working with E. I. Cueto, he treated the pits and fissures of the teeth of 269 elementary and high school children with an adhesive resin and found a striking 86% reduction of dental caries over a period of 21 months.

LELAND HENDERSHOT
Editor-in-Chief, American Dental Association

DERMATOLOGY

Many exciting new developments were reported in dermatology in 1967. These included the explanation of why ovulatory-regulating hormones and tetracyclines benefit acne, and the discovery of new treatments for Reiter's syndrome and porphyria.

Acne. The antibiotic tetracycline has often been used in treating acne, but not until 1967 was the effectiveness of the drug elucidated. P. L. Rashleigh found that even small doses taken orally reach the skin surface in measurable amounts. He suggested that the fat-soluble molecules of the antibiotic reach the skin surface as part of the sebum, the oily secretion of the sebaceous glands.

The use of drugs containing estrogen and progestin for treating acne has been a controversial topic for several years. Now it has been discovered that the beneficial effect of this therapy is due to the estrogen component alone. According to John M. Knox and Donald W. Owens, the estrogen suppresses the activity of the sebaceous glands.

A new method of smoothing acne scars was found by J. A. Leeming, who injected the drug triamcinolone directly into the scar tissue.

Drug Reactions. In 70 patients studied by J. Kinross-Wright, it was found that the tranquilizer chlorpromazine combined with the skin pigment melanin to produce a deep purple coloration. In a study of radioactive chlorpromazine, it was found that the drug became attached to melanomas (skin tumors) when it was injected into mice. This discovery by S. Blois provides a means of treating human melanomas with internal irradiation.

Fungus Infections. It has been known that pregnancy, diabetes mellitus, and some antibiotics predispose women to vaginal *Candida albicans* infections. R. D. Catterall proved that oral contraceptives may also lead to this type of infection.

Hormone Therapy. Systemic adrenal corticosteroid hormones remain the best treatment for many skin diseases, and C. L. Cope found that their use does not subject a patient to a significant risk of adrenal gland failure during stress, as was previously believed. In another study, J. Alma and F. L. Iber found that the oral administration of methandrostenalone relieved intractable pruritus (itching).

Spider Bites. The bite of the brown recluse (*Loxosceles reclusa*), a spider that lives in dark recesses inside houses and other buildings, produces a gangrenous sore that may take a long time to heal. C. J. Dillaha found that large doses of adrenocorticosteroid hormones prevents protracted convalescence.

Reiter's Syndrome. This unusual and sometimes crippling condition is characterized by arthritis, conjunctivitis, urethritis, and skin lesions. For years no treatment was known, but J. F. Mullins and his colleagues cured several cases with amethopterin.

Porphyria. In porphyria cutanea tarda, exposure to sunlight produces stinging blisters that leave mutilating scars when they heal. The treatment of this disease was unsatisfactory until A. G. Redecker helped several patients by giving them large doses of the antimalarial drug chloroquine.

Syphilis. Specific laboratory tests for diagnosing syphilis were unsatisfactory until W. E. Deacon, J. B. Lucas, and E. V. Price perfected an accurate and inexpensive test known as the fluorescent treponemal antibody absorption test (FTA-ABS).

Other Developments. Erythema multiforme was evoked by W. B. Shelley by injecting herpes simplex (cold sore) viruses into a patient, suggesting that this virus may be the cause of many erythema multiforme cases. In studying the rare skin disease elastasis perforans serpinginosa, H. B. Christianson found that 30 of 68 patients had associated congenital abnormalities, such as mongolism.

DAVID R. WEAKLEY
Southwestern Medical School, Dallas

DETROIT

The nation's worst urban riot in recent history, passage of the city's first open-housing bill, strikes, and a recall campaign against Mayor Jerome P. Cavanagh dominated the news in Detroit in 1967.

The Riot. During one week in July, 43 persons died in Detroit in the nation's bloodiest race riot. The rioting, touched off on July 23 by a police raid on an after-hours drinking spot in Detroit's Negro ghetto, was marked by sniper activity, looting and fire-bombing that destroyed entire city blocks. Property damage was estimated at $150 million. Michigan Gov. George Romney quickly ordered 1,500 National Guardsmen into the city, declared martial law, banned liquor and gasoline sales, and imposed a dusk-to-dawn curfew. On July 25, 4,700 federal troops moved into the city at Romney's request to aid city and state police and National Guardsmen, but not until July 30 was order fully restored.

A 37-member citizens' group was set up in August by Governor Romney and Mayor Cavanagh to plan reconstruction of the city's riot-torn areas. Among its recommendations was a state open-housing law, later placed before the legislature. The committee found jobs for 10,000 unemployed persons. The Ford Motor Company hired 5,000 poverty-stricken persons from inner city areas. (See also CIVIL RIGHTS.)

Open-Housing Ordinance. On November 28 an open-housing bill prohibiting discrimination by race, religion, or national origin in the selling and renting of housing was passed by Detroit's common council. It was the first such measure to be approved in the city's history.

Strikes. The Ford Motor Company was shut down for 61 days at the beginning of 1968-model-car production by a nationwide strike of 160,000 members of the United Automobile Workers (UAW). The bulk of Michigan's 80,000 auto workers are in Detroit. The strike, which began in early September, finally was settled with ratification of a 3-year contract.

A contract agreement similar to the one at Ford averted a strike against the Chrysler Corporation hours before a strike deadline. A contract agreement was reached at the General Motors Corporation without the setting of a strike deadline. (See also AUTOMOBILES; LABOR.)

The opening of Detroit's public schools was de-

RIOTING on 12th Street in Detroit, July 23, is shown in this award-winning photograph.

WIDE WORLD

layed nine school days in September when 11,000 members of the Detroit Federation of Teachers, an affiliate of the American Federation of Teachers, refused to work without a contract. Under the settlement, the teachers went back to the schools with pay increases of $1,700 over a 2-year period.

Detroit's two daily newspapers, the *News* and the *Free Press*, were shut down in November when Teamsters Union members seeking higher wages struck the *News* and the *Free Press* stopped publication under a publishers' agreement. The strike was settled in February 1968.

Police Slowdown. Police demands for higher pay resulted in a bitter struggle with the city administration in 1967. Police began a slowdown in the writing of traffic tickets on May 16. Countermeasures by the city led to the so-called "blue-flu epidemic," and by June 20 more than a third of the city's force reported themselves "too sick to work." Finally a citizens' committee worked out a truce between the city and police. Police officers returned to work on June 24 while the committee agreed to mediate the dispute.

Grand Jury Probe. On August 31, Judge George E. Bowles of the Wayne county circuit court ended a year's inquiry into crime in the county. The investigation produced no substantive criminal charges.

Finance. The 1967–68 budget provided for the spending of $417 million on city services.

CHARLES THEISEN
Staff Writer, Detroit "News"

DÍAZ ORDAZ, Gustavo. See biographical sketch under MEXICO.

DIPLOMATIC LIST. See AMBASSADORS AND ENVOYS.

DISASTERS. See ACCIDENTS AND DISASTERS.

DISCIPLES OF CHRIST. See CHRISTIAN CHURCHES.

DISEASES. See MEDICINE; PUBLIC HEALTH; and articles on specific diseases such as CANCER, EYE DISEASES, HEART DISEASE, etc.

DISTILLING INDUSTRY

Production of distilled spirits in the United States during the fiscal year 1967 decreased by 16,377,746 tax gallons from that of 1966. Production had been on a steady rise since 1963.

U.S. DISTILLED SPIRITS PRODUCTION
(in tax gallons[1])

	Fiscal 1967	Fiscal 1966
Whiskey	132,192,223	140,186,790
Brandy	18,024,374	17,857,662
Rum	1,674,911	2,637,380
Gin	27,796,758	27,030,847
Vodka	14,028,121	14,352,676
Alcohol and spirits:		
190° and over	641,238,623	642,997,951
Under 190°	38,019,188	44,288,638
Total	872,974,198	889,351,944

[1] A tax or proof gallon is a standard U.S. gallon of 231 cu. in. containing 50% ethyl alcohol by volume; a wine gallon is a standard U.S. gallon regardless of proof.

Rectified Spirits. In the fiscal year 1967, rectifying plants used 102,609,645 proof gallons (98,577,950 proof gallons in the fiscal year 1966) of domestic and imported liquors, and production by rectification amounted to 103,240,672 proof gallons (98,842,837 in 1966). Whiskey accounted for more than two thirds of the total production by rectification.

Output for Consumption. During the calendar year 1966 the bottled output of domestic and imported distilled spirits was 271,229,474 wine gallons, an increase of 7.3% over 1965. Whiskey bottled during 1966 amounted to 173,206,259 wine gallons for 63.9% of all distilled spirits bottled.

The remainder of the bottled output consisted of gin, 31,687,376 gallons; vodka, 34,667,111; rum (not including rum imported from Puerto Rico), 1,704,899; brandy, 9,265,833; cordials, liqueurs, and similar products, 16,213,541; and miscellaneous (including products bottled for exportation), 4,484,455.

U.S. DISTILLED SPIRITS WITHDRAWALS

	Fiscal Year 1967 (Tax gallons)	Fiscal Year 1966 (Tax gallons)
Taxable Withdrawals:		
Whiskey, bottled-in-bond[1]	7,316,170	7,813,661
Whiskey, total	94,821,404	93,050,949
Brandy	8,947,494	8,387,257
Rum	430,673	408,802
Gin	27,276,223	26,910,719
Vodka	13,698,198	13,962,533
Alcohol and spirits:		
190° and over	51,670,429	47,426,366
Under 190°	24,396,068	25,112,927
Total taxable withdrawals	221,240,489	215,259,553
Tax-free Withdrawals:		
For addition to wines:		
Brandy	988,298	555,044
Spirits	34,421,740	43,749,982
For export:		
Whiskey only	1,954,468	1,742,254
Other distilled spirits	1,950,128	1,496,844
Transfers to customs manufacturing bonded warehouses		
Whiskey only	713,002	556,342
Other distilled spirits	345,224	426,081
For vessels and aircraft	3,960	2,986
For use of U.S. government	1,266,070	1,315,386
Alcohol for hospital, scientific, and educational uses	3,058,171	3,028,252
Alcohol for medicinal, beverage, and other uses in Puerto Rico	130,134	142,012
Used for denaturation		
Alcohol	564,515,545	576,357,201
Rum	1,023,822	1,518,763
Total tax-free withdrawals	610,391,009	630,921,066

[1] Included in total whiskey.

Apparent Consumption. The apparent consumption of distilled spirits in the United States during the calendar year 1966 rose 5.0% over 1965 to 308,916,913 wine gallons. This figure is based on actual wholesale and retail sales in the control states, and on tax collections or shipments to wholesalers in the license states.

Revenues. Revenues accruing to the federal government from distilled spirits during 1966 amounted to $2,913,139,139, an increase of 1.9% over 1965. This accounted for 73.6% of federal collections for alcoholic beverages, which totaled $3,957,973,352. Taxes on beer accounted for 23.2% of the total alcoholic beverage receipts, and wine accounted for 3.2%. The federal excise tax rate on distilled spirits was $10.50 per proof gallon.

Imports and Exports. Dutiable imports of distilled spirits into the United States in 1966 amounted to 60,449,880 tax gallons, with whiskey comprising 87.5% of the total. Exports of distilled spirits amounted to 2,160,395 proof gallons.

Distillers' Dried Grains. Production of distillers' dried grains at all distilled spirits plants during 1966 consisted of 363,000 tons of dark grains, 28,000 tons of light grains, and 20,800 tons of dried solubles, for a total of 411,800 tons.

ROBERT W. COYNE
Distilled Spirits Institute, Inc.

DISTRICT OF COLUMBIA. See WASHINGTON, D. C.

DIVORCE. See MARRIAGE AND DIVORCE.

DOG SHOWS. See SPORTS.

DOMINICAN REPUBLIC

The year 1967 was officially designated the "Year of Development" in the Dominican Republic. The government of President Joaquín Balaguer, with the help of an enormous aid and technical assistance program on the part of the United States, sought to increase growth in nearly all sectors of the Dominican economy and society, and through this to bring the country out of its long stagnation.

Background. Much attention was focused on the success or failure of Balaguer's development plans. For the Dominican Republic had, in recent years, achieved an importance far out of proportion to its size or population. After 31 years of the extremely oppressive dictatorship of Generalissimo Rafael Leonidas Trujillo Molina, and the years of upheaval and instability following Trujillo's fall from power in 1961, the country exploded in 1965 in revolution and civil war which culminated in the use of U. S. troops. These events, particularly the American intervention, focused worldwide interest on this Caribbean nation.

Following a stormy postrevolution interim, Balaguer, a former puppet president under Trujillo, was elected president in 1966 on a platform of peace, national unity, and national reconstruction. His Year of Development plan was aimed at realizing these goals. Because U. S. policy—with regard not only to the Dominican Republic but also to other developing nations—was at stake, the attempt of Balaguer to bring his country out of the ravages of the destructive revolution into an era of growth and modernization was closely scrutinized by the nations of the rest of the world.

Economic Affairs. As the government's Year of Development projects were revealed, it became clear that concern would be almost exclusively directed toward economic growth, rather than political reform. Balaguer's administration, with the strong backing of the United States, initiated widespread and potentially far-reaching programs intended to modernize the nation's inefficient and often backward system of agriculture, diversify the sugar-growing-dominated economy, supply low-cost housing, increase exports, reduce corruption and waste, develop educational facilities, spur industrialization, provide water and electricity to isolated rural areas, and build aqueducts and farm-to-market roads.

At the same time, the budget was balanced, and the uneconomical government-owned sugar corporation was reorganized. A variety of public works projects provided more jobs for a labor force in which unemployment reached 40%, and a strict austerity program that froze wages and curbed the importation of numerous manufactured goods was put into effect. The cutback was aimed at relieving the chronic balance-of-payments deficit.

The programs launched in 1967 made some progress toward solving a few of the more crucial problems faced by the Dominican government. However, despite all these efforts, the economic decline seemed to continue. The situation was further aggravated in 1967 by the worst drought the country had suffered in 20 years.

Politics. While most of Balaguer's economic programs were forward-looking and long overdue, the political problems of the country, as yet not decisively confronted, were even more crucial. Early in 1967 the killing of a young leftist initiated a new wave of violence and bitter hatred. There was an attempted assassination of Gen. Antonio Imbert, who had himself been involved in the assassination of Trujillo and who had led the more conservative forces in the 1965 civil strife. The government also uncovered, on January 23, a plot to overthrow President Balaguer, and many leaders of the left-of-center opposition were terrorized by right-wing extremists—some were ambushed, others were detained in jail, and a few "disappeared." The armed forces, independent of civilian control and always a crucial element in Dominican politics continue to meddle in government and to oppress the non-Communist left. Several members of the hated Trujillo family were permitted to return from exile, while other *trujillistas* secured important posts in the government, which raised for many Dominicans the spectre of renewed dictatorship.

Suspicion, fear, and terror were prevalent throughout the year. The principal opposition group, the Dominican Revolutionary Party (PRD), was racked by internal dissension and missed the charis-

DOMINICAN REPUBLIC • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 18,816 square miles (48,734 sq km).
Population: 3,750,000 (July 1, 1966, est.).
Chief Cities (1965 est.): Santo Domingo, the capital, 435,155; Santiago, 99,020; San Francisco de Macorís, 30,824; La Romana, 28,521.
Government: *President*—Joaquín Balaguer (took office July 1, 1966 for a 4-year term). *Parliament* (National Congress)—Senate, 27 members (party seating, 1967: Reformists, 22; Dominican Revolutionary Party (PRD), 5); Chamber of Deputies, 74 members (party seating, 1967: Reformists, 48; PRD, 26).
Religious Faiths: Roman Catholics, 97% of population; Protestants, 1%; others, 2%.
Education: *Literacy rate* (1964), 35% of population. *Total school enrollment* (1962)—550,443 (primary, 479,084; secondary, 40,419; teacher-training, 346; technical, 25,272; higher, 5,322).
Finance (1966 est.): *Revenues*, $162,600,000; *expenditures*, $193,800,000; *monetary unit*, peso (1 peso equal U. S.$1).
Gross National Product (1965): $1,000,000,000.
National Income (1964): $674,000,000; average annual income per person, $193.
Cost of Living Index (1966): 119 (1958=100).
Manufacturing (metric tons): Sugar (1966), 793,000; cement (1965), 212,000; beer (1964), 30,200.
Crops (metric tons, 1966–67 crop year): Bananas (1963–64), 447,000; cassava (1962–63), 148,000; rice, 150,000; sweet potatoes and yams (1962–63), 76,000; coffee, 42,000.
Minerals (metric tons, 1965): Bauxite, 892,800; limestone, (1964), 400,000; gypsum, 90,000; salt, 11,000.
Foreign Trade (1966): *Exports*, $137,400,000 (chief exports: sugar, 76,700,000; coffee, $21,000,000; cacao, $11,200,000; tobacco, $6,600,000); *imports*, $160,000,000 (chief imports, 1964: chemical and pharmaceutical products, $15,140,000, automobiles, $8,750,000; cotton piece goods, $7,760,000). *Chief trading partners* (1964): U. S. (took 65% of exports, supplied 52% of imports); West Germany (took 2% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 5,794 miles (9,324 km); *motor vehicles* (1965), 41,500 (automobiles, 29,200); *railways* (1965), 137 miles (220 km); *airlines*, 4 international; *principal airport*, Santo Domingo.
Communications: *Telephones* (1966): 31,290; *TV stations* (1965), 4; *TV sets* (1965), 50,000; *radios* (1963), 139,000; *newspapers* (1965), 7 (daily circ., 98,000).

matic leadership of ex-President Juan Bosch, who had left for voluntary exile in Spain. Despite the talk of a dialogue between the government and the opposition, the PRD became impatient and fell more under the control of its radical wing. On May 7, PRD members walked out of the National Congress in protest against an alleged bomb attack on one of its senators, Rafael Casimiro Castro. Shortly afterward, the politically volatile national university was closed. The several Communist parties remained weak and divided, but the possibility of renewed guerrilla warfare was always present. On September 8, in an attempt to bolster his own authority, Balaguer juggled the military and police commands. Late in 1967, the extreme right-wing followers of General Elías Wessin y Wessin formed the Quisqueyano Party. The country seemed to be polarizing in the way it had before the start of the 1965 revolution.

All this did not augur well for the success of the Balaguer government. The president had been able to achieve some measure of national economic reconstruction, but the goals of peace and unity remained elusive. No one doubted the personal honesty and sincerity of Balaguer himself, who lived frugally and was clearly well-intentioned. But the question of whether he was strong enough to hold the seething country together remained unsettled. In the series of crises that occurred throughout the year, Balaguer proved himself a politician skilled enough to slide through difficulties and able to mollify or conciliate divergent, conflicting interests. But he was not a decisive leader, and he failed to deal with most of the larger political questions facing the country. He tended to act only on small issues, while the major problems remained unsolved and the country continued to drift.

Few Dominicans or foreign observers are as yet willing to predict whether Balaguer will last out his four-year term. The quiet that sometimes exists in the Dominican Republic is an uneasy one, and the country remains perhaps subdued but hardly serene. Deep divisions between social and political groups still fragment the nation, and widespread tensions and bitterness are always present beneath the surface.

On the other hand, by the end of 1967, President Balaguer's administration had survived longer in the quicksands of Dominican politics than any of the other close to a dozen governments of the country's post-Trujillo era. The nation's position remained ambivalent at year-end: most Dominicans in 1967 seemed to have tired of revolution and upheaval; however, the situation could easily flare up again.

HOWARD J. WIARDA
University of Massachusetts

DRAMA. See THEATER.

DRUGS

The 100,000 practicing pharmacists in the United States are now dispensing more than 1 billion prescription orders annually. They first passed the billion mark in 1966. The average prescription charge in 1966 was $3.56.

Total transactions in the 52,000 community pharmacies in 1966 amounted to more than $10 billion, a record, of which all drugs and health aids accounted for $5.2 billion. These sales included $3.3 billion for prescription medication and $1.4 billion for packaged medication.

Pharmaceutical Manufacturers. U. S. manufacturers' prescription drug sales reached $4.7 billion in 1966, a 10.5% increase over the previous year. Foreign sales rose nearly 17%, compared with a domestic rise of 8%. A survey by the Pharmaceutical Manufacturers Association (PMA) reported that the prescription drug industry's sales to government totaled $302 million, and that sales to federal hospitals alone rose 36%. The industry's domestic tax bill was $506 million, and its employees numbered more than 200,000.

Fewer new medicines were introduced in the United States in 1966 than in any of the previous 18 years for which accurate records are available, the Paul de Haen, Inc., Drug Information Services reported. New prescription drug products—single chemical agents, duplicates, combinations, and new dosage forms—dropped from 112 to 80, continuing a 10-year downtrend. The sharpest decline was in single new chemical agents, which reached a new low of 12 in contrast to a high of 63 in 1959.

Research and development expenditures by PMA members totaled $374.4 million for human research and $27.7 million for veterinary research. Government-financed research through the firms cost $14 million, raising the grand total to $416.1 million.

Government. Government involvement in drug matters continued to increase in 1967. The Food and Drug Administration expanded control of stimulant and depressant drug products. The nursing home provisions of Medicare, effective on Jan. 1, 1967, included drug benefits, as did Medicare for military dependents and the federal-state Medicaid programs.

In Congress, two dozen bills would have provided prescription medications for Medicare recipients not in institutions. The leading bill in that category was by Sen. Joseph M. Montoya of New Mexico, who also unsuccessfully introduced it as an amendment to Social Security law changes. A successful amendment was that by Sen. Russell B. Long of Louisiana to add to Social Security a federal formulary for welfare drug use and expenditures. Sen. Gaylord Nelson of Wisconsin conducted hearings on a wide range of drug topics.

The Administration sponsored in Washington a two-day National Conference on Medical Costs that included panel discussion of the cost of pharmaceutical services. At the request of President Johnson, Health, Education, and Welfare Secretary John W. Gardner established a Task Force on Prescription Drugs to study outpatient drug coverage under Medicare, and to report by Jan. 1, 1968.

Congressional hearings were also held on drug distribution (under Rep. J.D. Dingell of Michigan), and on physician ownership of pharmacies (under Sen. Philip A. Hart of Michigan). Congressional interest also focused on drug benefits for veterans, drug patents, medicine cabinet locks, family-planning drugs, mind-altering drugs, and drug samples.

Meetings and Observances. More than 4,300 pharmacists and guests attended the annual meeting of the American Pharmaceutical Association, in Las Vegas in April. In Toronto, in August, more than a score of U. S. pharmacists joined colleagues from Europe, Asia, and Latin America in commemorating the 60th anniversary of the Canadian Pharmaceutical Association.

WILLIAM S. APPLE
American Pharmaceutical Association

CAMERA PRESS-PIX

RESCUE WORKERS lift the stairs of a wrecked building in order to remove a victim of the earthquake that struck an area of Caracas, Venezuela, on July 29.

EARTHQUAKES

Earthquake activity in 1967 was somewhat greater than in recent years. The most destructive quakes took place in July, when about 500 persons were killed and more than $100 million damage was done to property. No serious earthquake struck the United States in 1967, however. The United States has constructed a worldwide network of earthquake recording stations to provide instant standard seismographic reporting around the world.

Europe. The first severe earthquake of 1967 occurred on January 4 in central Greece, but no one was killed. Greece was again struck on March 4 by a quake that was also felt in Turkey and Bulgaria. The shock had a magnitude on the Richter scale of nearly 7, but only 40 houses were damaged, mostly on Skyros Island in the Aegean Sea. In contrast, a quake of magnitude 6 in Greece on May 1 killed nine persons and left 22,000 homeless.

Southern France was shaken by an earthquake of magnitude 5.3 that injured many persons but killed only one. A more serious quake of magnitude 6.5 occurred on November 30 along the Yugoslavian-Albanian border; at least 18 persons were killed and 174 were injured. Most of the houses in the village of Debar, Albania, were reduced to rubble.

Turkey. A sharp earthquake struck northern Turkey on July 22, killing 97 persons and destroying 1,500 houses in northern Anatolia. The quake occurred in the western end of the Anatolian Fault. In Adapazari, east of Istanbul, over 1,000 buildings were destroyed. On July 26 another earthquake took place, this time in the eastern end of the Anatolian Fault. It destroyed 20,000 buildings in villages of the provinces of Tunceli and Erzincan and killed at least 112 persons. On July 30 the Adapazari region was again shaken, but although many structures collapsed only two persons were killed.

South America. An earthquake of magnitude 6.75 caused widespread destruction in Colombia on February 9. About 100 persons were killed and many more were injured; the Magdalena Valley was most seriously hit. Colombia felt a second shock on May 8, but only two persons were killed and property damage was slight. On July 29 a quake of magnitude 6.5 hit Colombia, 150 miles (240 km) north of Bogota. Ten persons were killed, and there was extensive damage in Betulia.

Venezuela itself experienced an earthquake on July 29. The quake, of magnitude 6.5, struck west of Caracas. It killed 277 persons and caused over $100 million worth of property damage. In the Los Palos Grandes section of Caracas four apartment buildings ranging from 10 to 12 floors high collapsed. In Maracay, west of Caracas, five persons were killed and much damage was reported.

Asia. The strongest earthquake of the year, with a magnitude of 7.25, struck Mongolia on January 5. It did no damage, however, because it occurred in an uninhabited area. On the other hand, more than 190 persons were killed and more than 1,000 injured as a result of tremors that struck the west coast of India from Bombay to Bangalore on December 11. The most severely damaged town was Koyna, about 150 miles southeast of Bombay.

On February 19, Indonesia experienced a quake of magnitued 6.75 that killed 54 persons and destroyed about 2,000 homes in Malang, east of the capital city of Jakarta. On April 11 a quake in southern Celebes caused 37 deaths and created considerable property damage.

Other Areas. Veracruz, Mexico, suffered extensive damage from an earthquake on March 4, but no lives were reported lost. A severe tremor was felt in northwestern Algeria on July 13. The quake killed ten persons in M'Kalif, southeast of Oran, and destroyed about 40 houses.

Seismology. One of the most interesting events in earthquake investigation in 1967 was the meeting in Switzerland of the International Union of Geodesy and Geophysics. Possibilities of earthquake prediction through study of minute local variations in the earth's magnetic field were among the topics discussed at the seismic meetings, held in Zurich.

The most important topic discussed at these meetings was the world's rift system. A ridge that runs down the mid-Atlantic Ocean and that is a mild source of earthquakes has been known for some years. Evidence was presented at the sessions that similar ridges run down the middle of the Pacific and Indian oceans and that they also extend under the continents—notably under the western United States and the Rhine Valley in Europe. It has been suggested that these ridges are caused by hot rocks pushing up from the mantle and splitting the crust, forming a rift bounded by ridges, and causing the ocean floor to spread. (See GEOLOGY.)

J. JOSEPH LYNCH, S. J.
Director, Fordham University Seismic Observatory

EASTERN ORTHODOX CHURCHES. See RELIGION—*Eastern Orthodoxy.*

ECONOMIC REVIEW

The American economy ran into a bit of turbulence in 1967. It encountered a brief downdraft, and it also was buffeted by international monetary adjustments. For the year as a whole, however, the overall trend continued upward, and the United States extended the longest sustained period of prosperity in its history, beginning in March 1961.

Among the problems confronting the economy were the continuing struggle in Vietnam and its accompanying threat of inflation, social unrest at home, and strikes. Fear of inflation brought a request by the administration in Washington for a 10% surcharge on the income tax. The requested surtax was intended to dampen consumer enthusiasm and to help offset a mounting federal government deficit spurred on by the cost of the Vietnam conflict. Ironically, though, a slowdown in the rate of growth in the economy dampened legislative enthusiasm for increasing taxes—Congress refused to enact the tax hike in 1967—and the divisive outlook added an air of confusion to an otherwise basically sound economic performance.

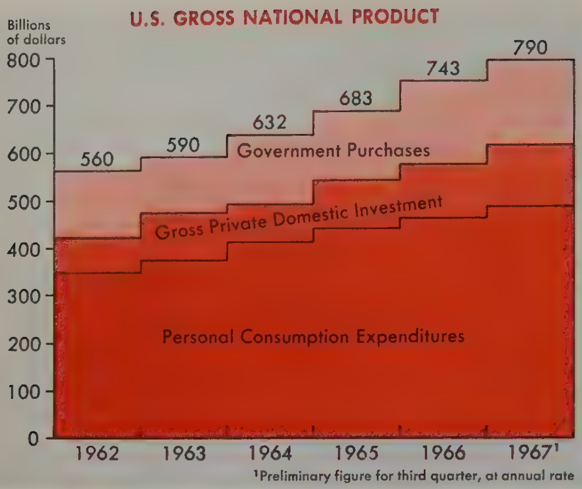
The economy was performing with strength as it entered 1967, but bad weather, strikes, and an unsustainable high level of performance in some economic areas combined to slow activity in the first half of the year. But in the last half of the year business picked up in most areas. The gains developed effectively enough and soon enough to prevent the slowdown from becoming a recession. Early in the year Congress restored the 7% investment tax credit and an accelerated depreciation allowance as an encouragement to business. Reflecting fears of a general slowdown, this prompt action appeared to have produced the desired result.

WIDE WORLD

ADAPAZARI, in Anatolia, Turkey, was heavily damaged in the violent earthquake that struck the area on July 22.

Measuring the Economy. By the most comprehensive measure of economic performance—the gross national product (GNP)—the U. S. economy paused as it entered 1967. GNP on an annual rate basis barely advanced in the first quarter of the year, rising only a little over $4 billion from the fourth quarter of 1966. On a constant-dollar basis (in which the inflation of current dollars is taken into account), GNP in the first quarter retreated slightly, indicating that any advance recorded was in price increases and not in real product. But on an annual rate basis, GNP improved as the year wore on, rising from $766 billion in the first quarter to $775 billion in the second quarter and on to $790 billion in the third quarter. Closing out 1967, GNP was in the range of $785 billion for the year as a whole, or about 5.6% ahead of the preceding year. This was a record high and was generally regarded as a gratifying performance. But it represented a slowing pace from the 8.6% rise in 1966 over 1965, and many observers noted that nearly half of the 1967 increase consisted of price advances.

Government spending at the federal, state, and local levels continued to rise in 1967. Early in the year federal defense spending advanced sharply, putting upward pressure on prices and raising the possibility of a substantial federal deficit. These developments appeared to underscore both the demands for increases in tax rates and for reductions in federal spending. A dilemma arose, however, as the private sector of the economy paused in the first half. The situation was aggravated by domestic unrest, which lent support to proposed spending on the antipoverty programs, and by existing commitments to the Vietnam War. The rise in federal



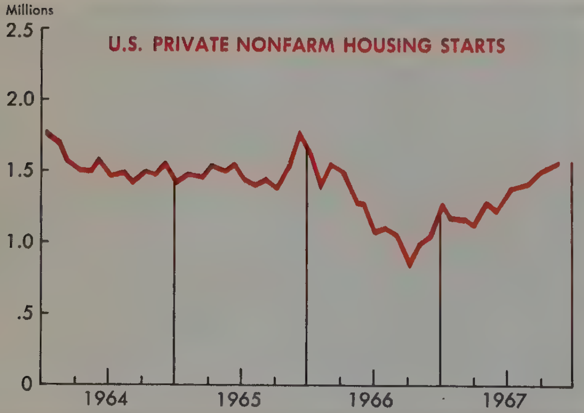
spending showed in the last half of the year, however, and further reductions were proposed to entice additional support for the proposed tax-rate increase.

The hesitation that the private sector of the economy experienced during 1967 was visible in the movement of the Federal Reserve Board's index of industrial production. The index (1957–59=100) had advanced markedly through 1966, gaining almost 9 points and closing out the year at 159, a record high. But in 1967 the index declined—even though it remained near the record high. The index fluctuated in the range of 156 to 158 during most of 1967, showing that the economy was performing at high levels even if unable to push higher. (See also INDUSTRIAL PRODUCTION.)

Steel and Automobile Industries. Two major industries affecting the overall industrial production performance, steel and auto manufacturing, failed to contribute any zip to the economy in 1967. Toward the end of 1967, steel orders were picking up. Strikes affected auto production, and it became obvious that the output levels achieved in 1966 would not be reached in 1967. (See also AUTOMOBILES; STEEL.)

Business Spending. Business was generally taking a more cautious outlook on its prospects than it had earlier in the 1960's. Anticipated business spending for new plant and equipment was scaled down during 1967, reflecting the more guarded view of future sales prospects. For the year as a whole, new capital spending was expected to total about $62 billion, a moderate advance of $1.6 billion over 1966. This increase would amount to a gain of about 2.3%, in contrast to the sharp advance of 16.5% in 1966 over 1965. Manufacturing industries, particularly in durable goods, lowered their investment sights as the year proceeded. Some moderate raising of capital outlays was anticipated by public utilities, railroads, and airlines.

Business profits were generally not as favorable in 1967 as they had been earlier, and this tended to discourage plans for expansion. There was some hope for the general improvement of business profits toward the end of 1967, but available data were spotty and difficult to interpret because of several large labor strikes. Certainly, inventory accumulation in 1967 was not as brisk as in 1966, and this held out some hope that there was room for sales expansion to meet these needs in the future. Corporate profits after taxes declined in 1967 from the record high achieved about mid-1966.



Data from U.S. Department of Commerce

Consumer Spending. Retail sales during the year ran at high levels and posted records as the year proceeded. As in other areas of the economy, the gains were relatively modest and did not reflect the strength experienced earlier. On the one hand, consumers were undoubtedly encouraged by rising personal income that gained steadily over the year. On the other hand, some consumption was undoubtedly discouraged by rising unemployment rates. Unemployment rose to its highest rate since late 1965. (See also CONSUMER AFFAIRS; INCOME.)

Housing. Housing construction showed brisk improvement in 1967. On a seasonally adjusted annual rate basis, private nonfarm housing starts had hit an abysmally low figure of 845,000 in the latter part of 1966. Gains were registered since then, and in late 1967 new housing starts were near 1.5 million.

Monetary Troubles. In one critical economic area, developments were definitely unfavorable. The U. S. balance of payments deficit deepened throughout 1967, and it appeared that the total deficit for the year might exceed $2.2 billion—the largest since 1964, when the deficit amounted to $2.8 billion.

Such funds in foreign hands can be used to purchase U. S. gold at $35 an ounce. With U. S. gold stocks down about $7 billion in a decade to a total of about $13 billion, the unfavorable deficit took on a more commanding significance. Because the dollar was under attack from some quarters and because a number of foreign governments look to the United States for assurance on the soundness of its money and economic system, several unpleasant possibilities faced Washington at the end of 1967.

The principal monetary drama of 1967 began to unfold on November 18 with the devaluation of the British pound, accompanied by an increase in the Bank of England's discount rate from 6.5% to 8%. The Federal Reserve Board followed by increasing its discount rate from 4% to 4.5%, a move aimed at preventing an outflow of American dollars, but it also resulted in tighter credit in the United States. A number of major U. S. banks promptly raised their prime rates from 5.5% to 6%.

And so at a time when the U. S. economy was struggling to push on to records of productive output, another clamp was put on expansion. Many classes of borrowers found themselves paying the highest rates for money since the 1930's. (See also BANKING; INTERNATIONAL FINANCE.)

JACKSON PHILLIPS
Dun & Bradstreet, Inc.

ECUADOR • Information Highlights

SOUTH AMERICA

Area: 109,483 square miles (283,561 sq km).
Population: 5,386,000 (Oct. 31, 1966, est.).
Chief Cities (1965 est.): Quito, the capital, 401,811; Guayaquil, 651,542.
Government: *Provisional President*—Otto Arosemena Gómez (elected by Constituent Assembly, Nov. 17, 1966).
Religious Faiths: Roman Catholics, 94% of population; Protestants, 3%; others, 3%.
Education: *Literacy rate* (1962), 67.3% of population aged 15 and over. *Total school enrollment* (1964)—868,333 (primary, 751,937; secondary, 56,629; teacher-training, 11,918; technical, 35,363; higher, 12,486).
Finance (1966 est.): *Revenues,* $200,000,000; *expenditures,* $200,000,000; *public debt,* $243,000,000; *monetary unit,* sucre (18.18 sucres equal U. S.$1, official rate).
Gross National Product (1965): $1,116,000,000.
National Income (1965): $956,000,000; average annual income per person, $188.
Cost of Living Index (1966), 130 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 378,000; gasoline, 254,000; sugar (1966), 184,000; wheat flour, 121,000; meat (1964), 72,000; beer; 34,400.
Crops (metric tons, 1965–66 crop year): Bananas, 3,300,000 (ranks 2d among world producers); cassava, 254,000; citrus fruits, 218,000; rice (1966–67), 200,000; maize, 191,000; coffee (1966–67), 49,100; cocoa beans (1966–67), 47,000.
Minerals (metric tons, 1965): Crude petroleum (1966), 342,000; salt, 35,000; copper, 181; lead, 163; silver, 69,966 troy ounces; gold, 11,445 troy ounces.
Foreign Trade (1966): *Exports,* $189,000,000 (chief exports, 1965: bananas, 1964, $84,200,000; coffee, $37,300,000; cacao, $19,300,000; rice, 1964, $1,100,000); *imports,* $153,000,000 (chief imports, 1964: transport equipment, $19,928,000; nonelectrical machinery, $18,320,000; paper, paper board, and manufactures, $12,467,000). *Chief trading partners* (1964): U. S. (took 51% of exports, supplied 46% of imports); West Germany (took 16% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 4,493 miles (7,231 km); *motor vehicles* (1965), 40,000 (automobiles, 17,500); *railways* (1965), 615 miles (990 km); *merchant vessels* (1965), 5 (26,000 gross registered tons); *operating airlines,* 10 international; *principal airports,* Guayaquil, Quito.
Communications: *Telephones* (1966): 43,499; *television stations* (1965), 3; *television sets* (1965), 42,000; *radios* (1965), 510,000; *newspapers* (1965), 23.

ECUADOR

Ecuador enjoyed marked economic improvement in 1967, a trend that continued from late 1966 after a very poor situation in the first half of 1966. Greater political stability and confidence followed the establishment of a constitutional government. Toward the end of the year, electioneering began for the 1968 general elections.

Political Affairs. The 79-member Constituent Assembly chosen in October 1966 wrote a new constitution—the 17th in the history of Ecuador—that became effective on May 25, 1967. The assembly, which also elected Otto Arosemena Gómez provisional president, later resolved itself into a unicameral congress to serve until the June 1968 elections.

President Arosemena Gómez was elected as a compromise candidate with the backing of a former (one-term) president, Camilo Ponce Enríquez, a conservative. The election of Arosemena, who later announced that he would not be a presidential candidate in 1968, stirred hopes for the later reelection of Ponce Enríquez and dimmed the hopes of four-time president José María Velasco Ibarra, a populist whose critics accuse him of being a demagogue. Velasco returned to Buenos Aires to live; however, his chances seemed improved by local elections on June 11, 1967, when center-left candidates won major offices in 9 out of 17 of Ecuador's largest cities. Ponce Enríquez criticized Arosemena for behaving too independently when the latter paid a visit to Velasco in November.

On other fronts, a small military uprising in October passed with few consequences. Moderate student demonstrations took place in May at Central University in Quito, and more violent ones, culminating in a 24-hour nationwide strike by students, occurred at Guayaquil in November.

Foreign Affairs. Ecuador's foreign policy became noticeably more nationalistic and defiant under Arosemena, and was marked by a few clashes with the United States.

In April, at the Punta del Este meeting of hemisphere presidents, Arosemena bitterly criticized U. S. lending policy under the Alliance for Progress. Arosemena was the only president not to sign the final declaration, which advocated economic integration of Latin America. U. S. officials claimed that Ecuador's hostility was based on the reduction of a promised U.S. loan from $10 million to $7 million. In negotiations with fellow members of the Latin American Free Trade Association, Ecuador demanded continued treatment as a poor country.

On October 8, U. S. Ambassador Wymberley Coerr was recalled when Ecuador alleged that he had publicly criticized Arosemena. The U. S. State Department denied the charge.

Economic Affairs. The years 1966 and 1967 saw great changes in the Ecuadorian economic atmosphere. At first the country experienced difficulty: government spending was cut sharply, private credit was restricted, and imports were curtailed. Taxes were raised and, in some cases, reformed. A low point was reached in July 1966; and, after the International Monetary Fund had granted a $13 million standby agreement, Ecuador negotiated a $10 million budget support loan (later cut to $7 million) with the U. S. Agency for International Development (AID). The free-market value of the sucre, 18.53 to U. S.$1 in January 1966, fell to 22.20 in May. By January 1967, however, the sucre had recovered to 20.84 and reached 19.94 in September. The foreign trade deficit of $47.9 million in 1965 was reduced to $16.8 million in 1966.

There were other signs of economic improvement. The gross national product rose an estimated 6% in 1966, and new industrial investments stood at $603 million. In October the United States began negotiation of $20 million in new AID loans for educational and social needs. A Gulf-Texaco consortium drilled several successful wells in eastern jungle areas near the Colombian border.

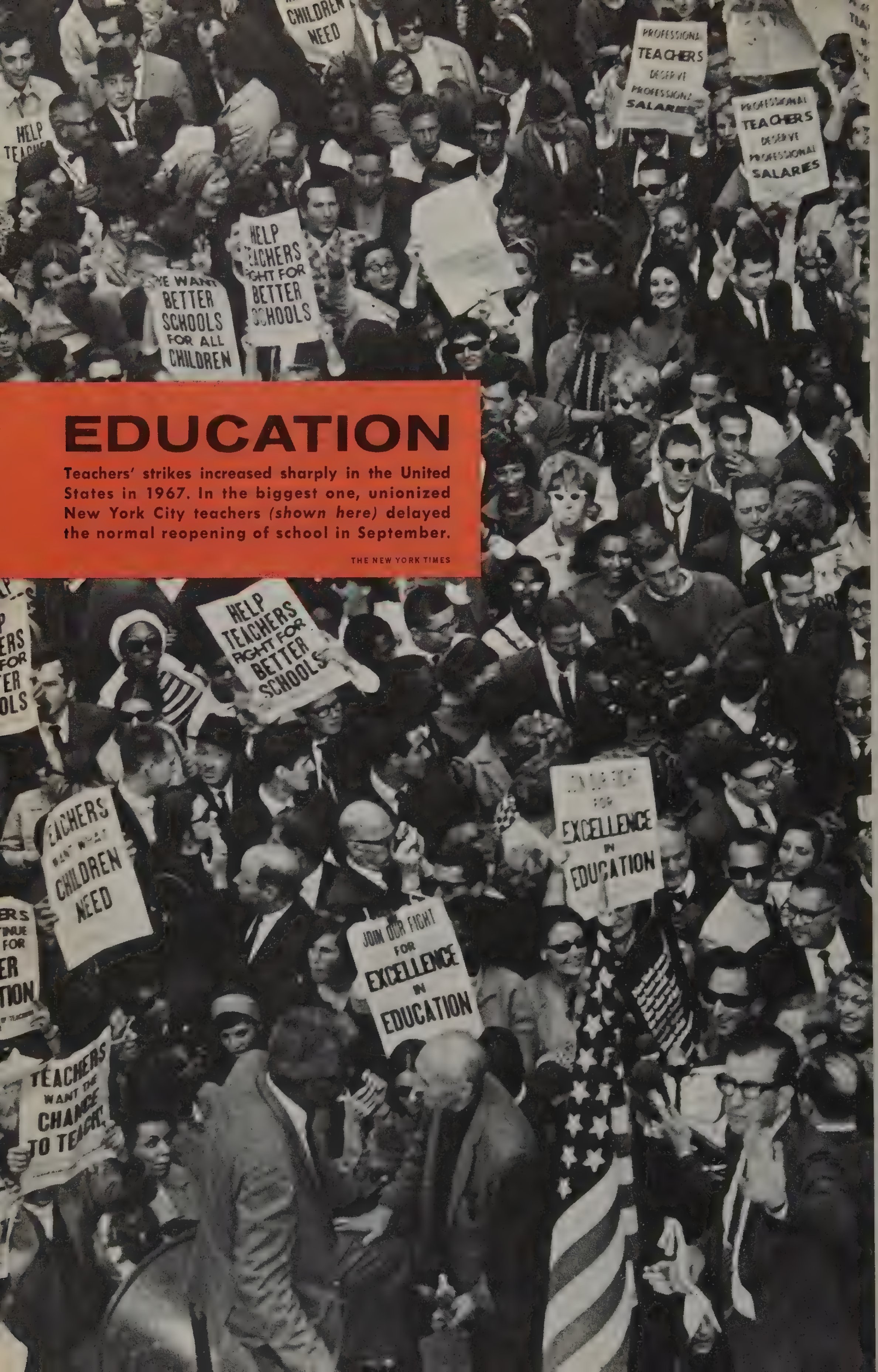
The Ecuadorian Institute for Agrarian Reform and Colonization had allotted over 8 million acres to some 23,000 families by March 1966, and the Roman Catholic Church episcopate in 1967 decided to grant 144,000 acres of its Andean basin land to some 1,200 families as part of a broader program.

PHILIP B. TAYLOR, JR.
The Johns Hopkins University

EDUCATION

Teachers' strikes increased sharply in the United States in 1967. In the biggest one, unionized New York City teachers *(shown here)* delayed the normal reopening of school in September.

THE NEW YORK TIMES


CHILDREN NEED
PROFESSIONAL TEACHERS DESERVE PROFESSIONAL SALARIES
PROFESSIONAL TEACHERS DESERVE PROFESSIONAL SALARIES
HELP TEACHERS FIGHT FOR BETTER SCHOOLS
WE WANT BETTER SCHOOLS FOR ALL CHILDREN
HELP TEACHERS FIGHT FOR BETTER SCHOOLS
TEACHERS WANT WHAT CHILDREN NEED
JOIN OUR FIGHT FOR EXCELLENCE IN EDUCATION
JOIN OUR FIGHT FOR EXCELLENCE IN EDUCATION
TEACHERS WANT THE CHANCE TO TEACH

EDUCATION

Strikes by teachers delayed or disrupted the opening of schools in two of the largest U. S. cities—New York and Detroit—in September 1967. Among other developments of the year in education, James B. Conant appraised the comprehensive high school; Pittsburgh embarked on a bold program to build super high schools set in educational parks; and an international comparison showed U. S. students lagging in mathematics. This article discusses elementary and secondary education; for higher education, see COLLEGES AND UNIVERSITIES.

TEACHERS' STRIKES

In New York City, a strike by the 49,000-member United Federation of Teachers (UFT), an AFL-CIO affiliate, interfered with the normal schooling of 1,100,000 children for 14 class days. The strike against the nation's largest school system began on September 11, the opening day of the fall term. At one point attendance at the 900 city schools dwindled to 130,000, or 12% of normal, with more than 40,000 of the 55,000 teachers out.

Union leaders demanded a basic wage scale of $7,500 to $15,000 in 10 years, with a top of $18,000 for teachers with maximum qualifications, in place of the existing scale of $5,400 to $9,950 in 14 years, with a top of $11,950. The UFT also called for improvements in school conditions for teachers and pupils, including smaller classes, special programs for slum schools, and more authority to deal with disciplinary problems.

The strike ended with the ratification of a new contract providing an additional $135 million in wages and benefits over 26 months. A minimum pay increase of $1,200 resulted. The new scale provided a range of $6,750 to $13,750 in basic annual salary.

In Detroit, the opening of school for 300,000 pupils was delayed 13 days until the city's 11,500 teachers won an $850 across-the-board annual increase for two years. A $7,500 to $12,700 scale was to become effective in 1968.

Teachers' strikes extended summer vacations for 200,000 pupils in other parts of Michigan; 90,000 in Broward county, Fla. (including Fort Lauderdale); 24,000 in East St. Louis, Ill.; and 6,000 in McCracken county Ky.

The American Federation of Teachers (AFT), with its militant policy of strike calls, has developed as a rival organization to the powerful National Education Association, which has preferred "professional sanctions" as a means of improving salaries and teaching conditions. The AFT's greatest strength is in the large cities, where crowded classes, antiquated buildings, and disadvantaged children make teaching difficult. Its officers contend that they seek better education for children as well as improved salaries for teachers. Accomplishments in the area of salary increases have been impressive. AFT leaders have announced plans to form chapters in new metropolitan areas where the local or state affiliate of the National Education Association is the only teachers' organization.

NEW CONANT REPORT

James B. Conant, whose survey, *The American High School Today,* published in 1959, was widely read and discussed, has followed with a new appraisal under the sponsorship of the American Association of Secondary School Principals. It is entitled *The Comprehensive High School Today: A Second Report to Interested Citizens.* The book, published in 1967, reaffirms Conant's belief that the comprehensive high school, with a broad program of course offerings, is the type best suited to American needs. The returns from his survey of 2,000 medium-sized high schools indicate that considerable progress has been made in improving the curriculum, especially in the academic subjects.

However, the former Harvard University president expresses concern over the inequalities among schools within the same state and from state to state. Only about 10% of the high schools presently meet all the criteria he had set up in his original study. His report confirms that the American ideal of equality of educational opportunity is far from being realized.

Noting that state support varies from 67% in some school districts to as low as 6% in others, Conant urges that more power and resources be afforded the state governments to effect improvements. The Conant report proposes that each state be allocated a share of the funds collected by the federal income tax to be spent for education as the individual state sees fit.

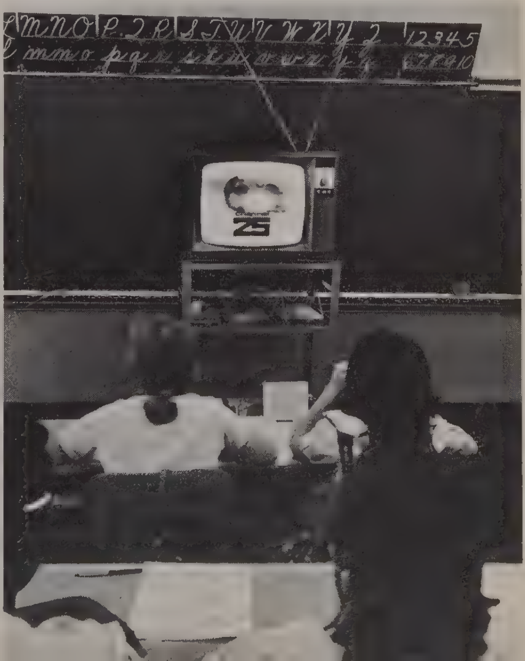
The study reveals considerable progress in improving the academic offerings. Of the 2,000 schools in the survey, 816—or 40.3%—now teach calculus. The new physics program is used in almost half of the schools, and 64.9% offer the new biology.

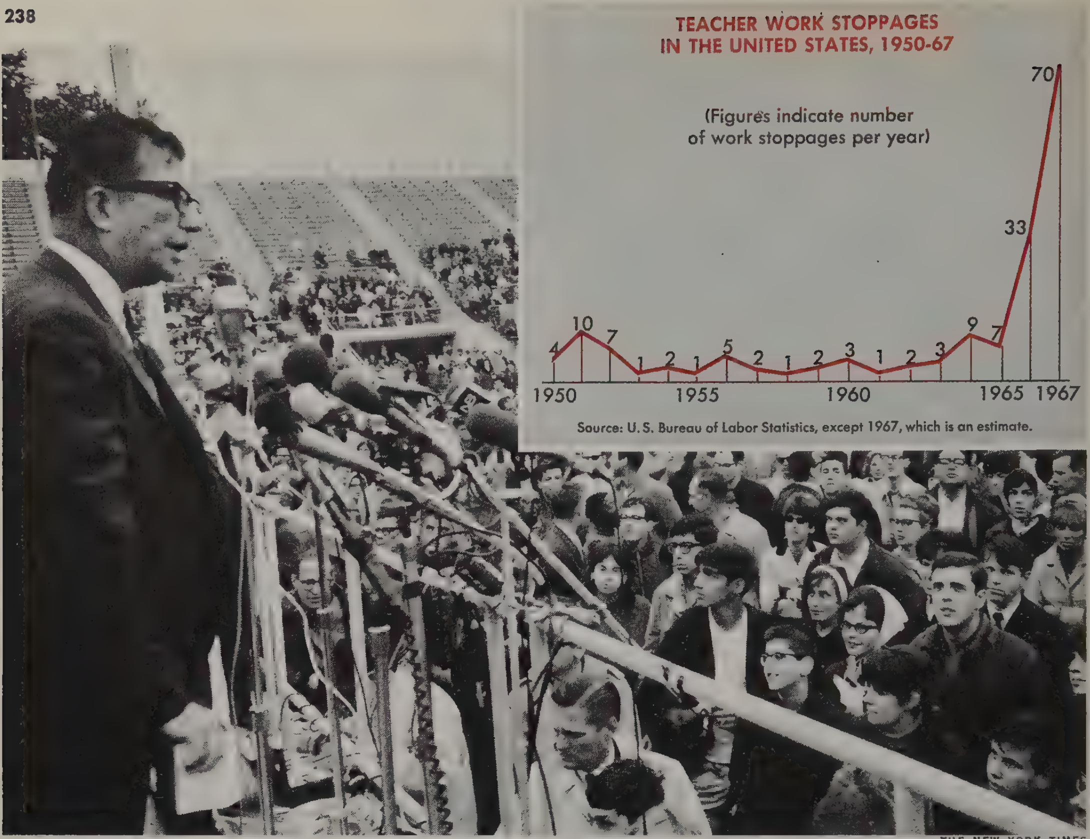
A 4-year course in a foreign language is available in 1,290 of the schools. In contrast, the earlier Conant study had reported that most high schools offered only two or three years of a language.

Guidance counseling, an important ingredient of the comprehensive high school, is still badly understaffed. Conant's earlier report recommended one full-time counselor for every 250 pupils. Only 3.4% of the 2,000 schools were meeting this ideal in 1967. In only 14% was the ratio 1 to 299 or less.

NEW YORK CITY SCHOOLS opened their own television station in 1967. The station—its Channel 25 identification appears on the screen—sends lessons to 50,000 classrooms.

THE NEW YORK TIMES





TEACHER WORK STOPPAGES IN THE UNITED STATES, 1950-67

(Figures indicate number of work stoppages per year)

Source: U. S. Bureau of Labor Statistics, except 1967, which is an estimate.

ALBERT SHANKER, president of the striking United Federation of Teachers, New York City, addresses a rally in September.

EDUCATIONAL PLANNING

In educational planning, Pittsburgh moved toward creation of super high schools, and the new John F. Kennedy High School in Wheaton, Md., embodied many innovations.

Super High Schools. Like many other large cities, Pittsburgh has experienced a steady exodus of white families from the inner city, with a corresponding increase in the number of Negro families. To halt this trend and to forestall de facto segregation while it is still possible to do so, the city has embarked upon a bold plan.

At an estimated cost of $120 million, Pittsburgh plans to replace 23 old high schools—the newest was built 40 years ago—with five super high schools located in 40-acre educational parks and enrolling 5,000 to 6,000 students each.

A broad curriculum will be offered, and salaries will be high enough to attract topflight teachers and administrators. The schools will also serve as adult education centers, offer facilities for theater and music groups, and possibly provide space for public health agencies. A year-round, 24-hour-a-day operation of facilities is anticipated.

School district lines are being redrawn to provide a cross section of the entire city for each educational complex. It is hoped to balance the racial mixture at one third Negro, two thirds white.

The project represents the largest single investment of public money in the history of Pittsburgh. Millions of dollars are now being spent for sites. The first school is scheduled to open in 1971.

High School of the Future. In the new John F. Kennedy High School in Wheaton, Md., .a special effort has been made to provide facilities for independent study programs that enable the bright student to work at his own rate. There are rows of study carrels in the library; a resources center has tapes, films, and records, along with individual projector-screen combinations for viewing; and "seminar banks," or a series of small rooms, are available to discussion groups outside of the classroom. The school has its own closed-circuit television system and a full-time TV technician. The principle of in-flight movies is used, with the inverse image projected on the screen from behind. A concave mirror throws a much-enlarged image on the back of the translucent screen.

Team teaching is emphasized. An "instructional center" with removable dividers enables a teacher to lecture to six classes at once. For flexibility, the school day is divided into 17 "modules," each 23 minutes long.

ACHIEVEMENT IN MATHEMATICS

The first major international comparison of achievement in mathematics, in which 133,000 students in 12 countries participated, revealed that standards of accomplishment in the United States fall below those of Japan and Britain.

Students were tested at age 13 and at the end of the secondary school period. Japan placed first in both categories. In the 13-year-old group, 76% of the Japanese scored in the upper half, compared with 43% of the Americans; 31% of the Japanese were in the upper tenth, compared with 4% of the Americans. The comparisons with Japan are pertinent, as both countries enroll a high proportion of their youth up to age 14.

In the assessment of the high school seniors the American record was even worse. Only about 2% reached the upper tenth, compared with 26% in Britain, followed closely by Belgium, Japan, and Israel, all above 20%. The nonselective character of the American high school makes comparisons of this type open to question. However, in this instance, data on the mathematical ability of all youth at the age of high school graduation, whether they have attended or not, still do not present a favorable picture of the United States.

The National Council of Teachers of Mathematics feels that elementary teachers are not well prepared to teach mathematics. Fewer than half of the teaching-training institutions require a course in mathematics in their program for prospective elementary teachers.

The survey reveals that students trained in the "new mathematics" scored higher on the tests than did students with traditional mathematics.

DESEGREGATION

The U.S. Department of Health, Education, and Welfare (HEW) announced in September 1967 that its surveys of the racial makeup of schools, conducted previously only in the 17 Southern and border states, would be made on a nationwide basis. In line with recent federal court decisions, guidelines have now been prepared for Northern schools so that discriminatory practices can be dealt with.

Federal Surveys. Although the new federal surveys will not be subject to local or state approval, HEW's Office for Civil Rights has announced that it hopes to work through the chief state school officer. The survey is expected to "identify schools which may have . . . compliance problems." However, federal aid will not be cut off solely on the basis of information obtained in the survey.

Some progress has been made, even if only in a token fashion. In the South as a whole, the percentage of Negroes attending integrated schools has doubled each year since 1964: 3% in 1964-65, 6% in 1965-66, and 12% in 1966-67. The federal government guidelines, raising the possibility of withholding federal funds, have been important factors.

Washington Ruling. On June 19, in a case involving the schools of Washington, D.C., Judge J. Skelly Wright, of the U.S. Court of Appeals, went beyond the Supreme Court decisions of 1954 in ruling de facto segregation itself to be unconstitutional. Residential patterns that result in schools that are almost entirely Negro or white, he held, constitute "unintentional but undesirable discrimination." Judge Skelly ordered the busing, on a voluntary basis, of Negro pupils to predominantly white public schools; the mandatory redistribution of teachers among white and Negro schools; and the immediate abandonment of what educators call "the track system."

This system, initiated by school superintendent Carl F. Hansen in 1955, sought to group pupils according to their learning ability into "honors," "regular," "general," and "basic" curricula.

With Negro children constituting 93% of the public school enrollment, Washington is a dramatic example of the difficulty of attaining racial balance as the ethnic character of the population changes. For several years there has been a steady exodus of white families to suburban Virginia and Maryland. The track system was regarded as a means of stemming the withdrawal of white pupils, most of whom were enrolled in the "honors" and "regular" tracks. But Negro leaders charged that disadvantaged pupils were assigned to lower tracks on the basis of "inappropriate aptitude testing geared to middle-class white children."

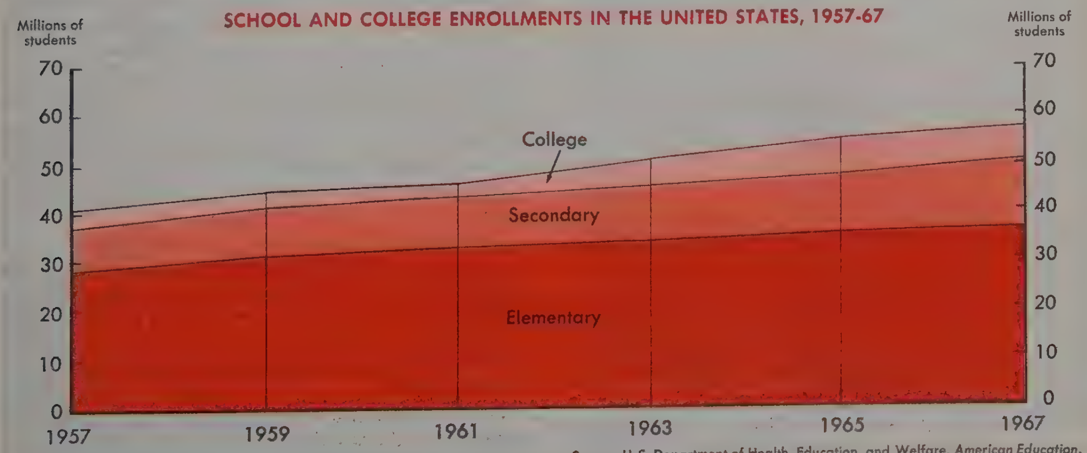
When the district school board (which has a Negro majority) refused to appeal Judge Skelly's ruling, Hansen resigned on July 3. The track system was discontinued, although many educational leaders regard some form of ability grouping as highly desirable.

While Judge Skelly's ruling applied only to the District of Columbia, educators were concerned about its possible implications. De facto segregation is widespread, especially in the large cities. The busing of white or Negro pupils to obtain better racial balance has been violently opposed in some areas. Where it has been on a voluntary basis, as in New York, only about 5% of those eligible have taken advantage of it.

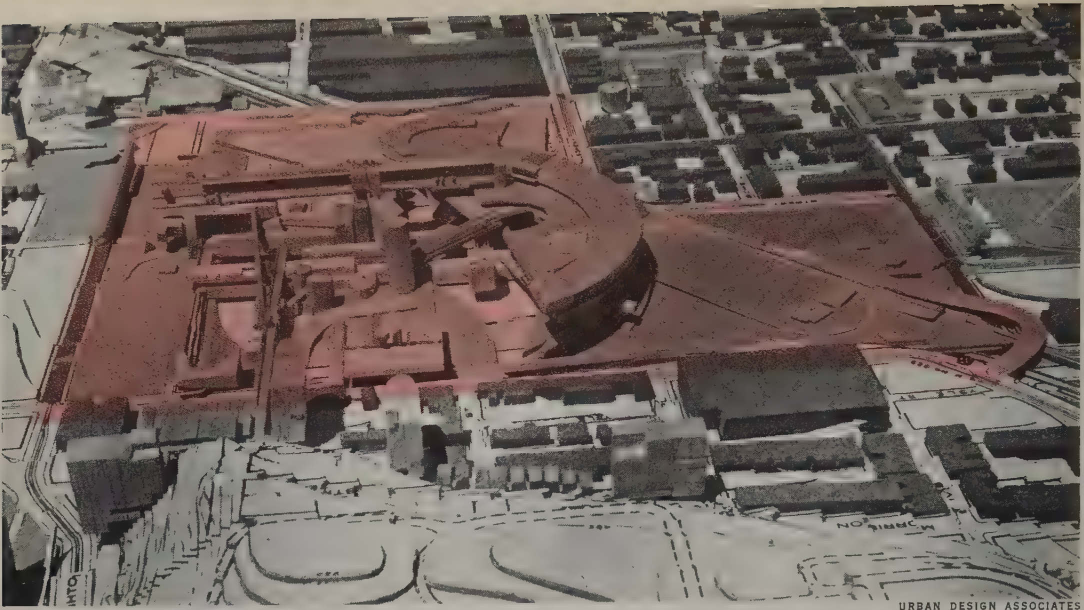
Court opinion has been divided on the constitutionality of school segregation based on neighborhood dwelling patterns. The issue has not been ruled upon by the U.S. Supreme Court.

Civil rights leaders have charged that substandard educational facilities in Negro ghettos have been

SCHOOL AND COLLEGE ENROLLMENTS IN THE UNITED STATES, 1957-67



Source: U.S. Department of Health, Education, and Welfare, *American Education*.



URBAN DESIGN ASSOCIATES

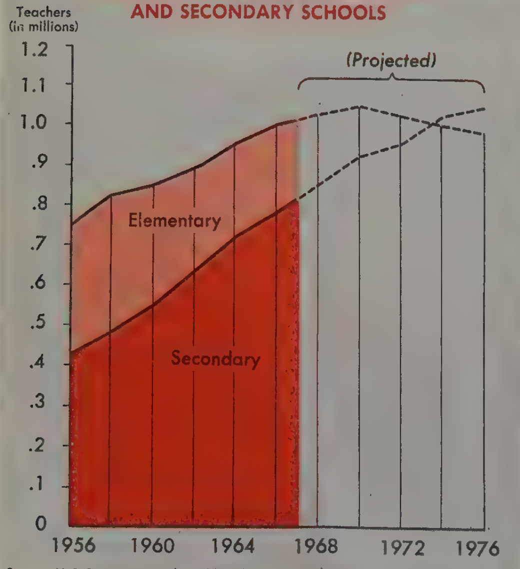
SUPER HIGH SCHOOLS will rise in five educational parks in Pittsburgh to replace 23 schools. This drawing shows one school that is a city within a city.

a contributing cause of the unrest resulting in the 1967 summer riots. It is alleged that Negro children have been crowded into inferior slum schools, while the more affluent whites flee to the suburbs, with vastly superior, predominantly white schools.

ENROLLMENTS

For the 23d consecutive year, the number of pupils attending elementary and secondary schools in the United States increased. According to estimates compiled by the U.S. Office of Education, the fall 1967 school enrollment from kindergarten through grade 8 was 37 million. The increase of 500,000 over the 1966 enrollment is impressive, but it represents some decline from previous increases. In earlier years the high birthrate of the late 1940's and early 1950's had resulted in some annual increases of over one million in elementary school enrollments.

TEACHERS IN U. S. PUBLIC ELEMENTARY AND SECONDARY SCHOOLS



Source: U. S. Department of Health, Education, and Welfare, *American Education*

Secondary school enrollments (grades 9-12) reached an estimated 13.7 million, an increase of 400,000 over the fall 1966 figure. Proportionately, the increase in high school enrollment (3%) was greater than that in the elementary grades (1.4%). The higher education enrollment was up 8.3%.

Enrollment Trends. The U. S. Office of Education has predicted an increase of 25% in the high school enrollment between 1966-67 and 1975-76, from 13.3 million to 16.6 million. By the latter date, nearly 98% of the population aged 14 to 17 may be enrolled in school, compared with the present 93%. These projections are based on the birthrate in the 1950's and the growing percentage of pupils who remain in school.

The increase in elementary school enrollments will be slight because the birthrate declined after 1961. By 1975-76, elementary school pupils are expected to total 37 million, only a nominal gain from the 36.4 million enrolled in 1966-67.

Nonpublic Schools. The school enrollments cited above include both public and nonpublic schools. The estimated fall 1967 enrollment in nonpublic elementary schools (kindergarten through grade 8) was 5,200,000; in high schools (grades 9-12), 1,400,000. The largest nonpublic segment is that of the Roman Catholic parochial schools. The National Catholic Education Association (NCEA) estimated the 1967-68 elementary school enrollment at 4,263,000, compared with 4,376,872 the previous session. Catholic high schools enrolled 1,350,000, compared with 1,108,177 the year before.

According to the NCEA, the sharp decrease in elementary enrollment, after many years of annual increases, is due to the elimination of kindergartens and first grades in some schools and to the limitation of class size in others.

Nursery Schools and Kindergartens. Three out of every ten children aged 3 to 5 were in nursery schools and kindergartens in 1966–67, a U. S. Office of Education survey shows. The proportion two years earlier was one in four. As a group, the 5-year-olds show the highest attendance—62.2%—compared with 18.9% for the 4-year-olds and 6.1% for the 3-year-olds.

Preschool enrollment rates are lowest for children of low-income families, but a sharp increase has occurred, attributable in part to federally aided Head Start programs and other special provisions for economically disadvantaged children.

The kindergarten-nursery school enrollment, public and private, in 1966–67 was about 3,674,000. Of this number, 686,000 were enrolled in nursery schools (public, 213,000; private, 473,000), and 2,988,000 in kindergarten (public, 2,413,000; private, 575,000).

ADMINISTRATION

The U. S. Office of Education has estimated that the nation will spend a record $52 billion for education for the 1967–68 school year.

Expenditures. Current expenditures and interest charges for public elementary and secondary schools in 1967–68 are expected to total $25.9 billion; for nonpublic schools, $3.5 billion. Capital outlays for the same period are estimated at $4 billion for public schools and $0.5 billion for nonpublic schools. The faith of the American people in education becomes increasingly apparent as a larger proportion of the national income is spent for the establishment and maintenance of schools and colleges.

Congress passed on Dec. 15, 1967, a compromise measure providing a massive $9.3 billion for a 2-year expansion of federal aid to elementary and secondary schools. Last-minute conferences resolved House and Senate differences over the wording of the enforcement of school desegregation laws and the extent of state control over certain funds. Although the Senate had sought a 3-year commitment of federal aid, the bill as passed provides a record $4.5 billion for fiscal 1969 and $4.8 billion for fiscal 1970 only.

Teaching Staff. The estimated number of classroom teachers in public and nonpublic elementary and secondary schools reached a record total of 2,107,000 in the fall of 1967. Of this number, 1,204,000 were employed in the elementary grades, and 903,000 in high school.

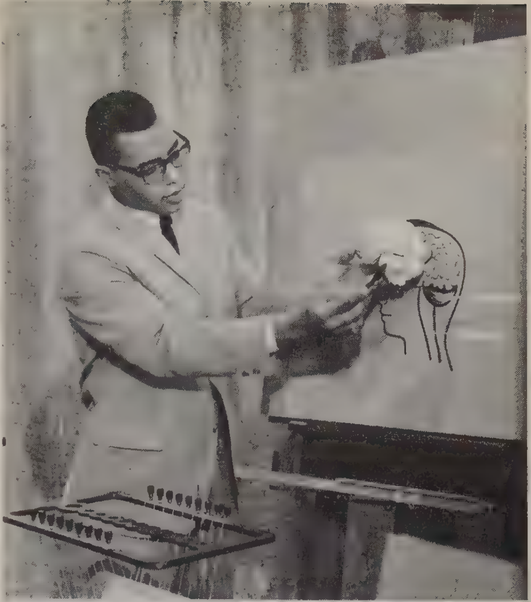
The shortage of public school teachers is continuing, according to the NEA research division. Twenty states reported a more severe shortage of qualified applicants in the fall of 1967 than in the previous fall, itself a time of critical conditions. None of the 45 states that replied reported an excess of applicants. The research division estimates that 171,300 additional teachers are needed to meet standards of quality in educational staffing.

The average annual salary of classroom teachers in 1966–67 was just below $7,000. Only 1% got less than $4,000, while 6.4% received $10,000 or more. The latter percentage represents more than a doubling in two years, even though it is only a small proportion of the total number of teachers.

LEGISLATION

On June 29, 1967, one day before the Teacher Corps was scheduled to expire, President Johnson signed the new Education Professions Development Act, which extended the Teacher Corps for three years and authorized several new teacher-training programs. The administration's request of $36 million for the corps was cut to $13.5 million by Congress.

The overall billion-dollar act authorized a new 2-year program, starting in mid-1968, consisting of institutes, subdoctoral fellowships, traineeships, and other projects to train college teachers, administrators, and education specialists.



MANPOWER EDUCATION INSTITUTE

"TV HIGH SCHOOL" directed lessons to adults who lack a high school diploma. The Manpower Education Institute developed 60 lessons for educational and commercial TV use.

Other parts of the act merge the present National Defense Education Act (NDEA) institutes for guidance counselors and teachers of certain subjects into a new and broader program of in-service and preservice training for elementary and secondary teachers of any subject generally taught; extend and broaden the present fellowship program for elementary and secondary teachers; and establish new programs, starting in mid-1968, to attract, recruit, and provide short-term training for the schools.

EDUCATIONAL TELEVISION

In October 1967 a nationwide television program to enable adults without a high school education to qualify for equivalency diplomas was launched in the New York City and Washington, D. C., areas under the auspices of the Manpower Education Institute. At a cost of $12.50, students could obtain a 10-volume home-study kit of books on English grammar, general mathematics, social studies, natural sciences, and literature to be used with the television instruction. Programs were offered from 6:30 to 7:30 P. M., Monday through Friday, for 12 weeks.

REGIONAL EDUCATIONAL LABORATORIES

About $15 million has been allotted by the U. S. Office of Education to regional educational "laboratories" designed to enlist the cooperation of educators at all levels in fostering new programs and ideas. The 20 laboratories throughout the country are actually associations of the colleges and universities, school systems, and state departments of education in a given area, working together to improve education at all levels. A typical laboratory, the Central Atlantic Regional Educational Laboratory, set up headquarters at Alexandria, Va., to study art, dance, literature, music, and theater arts.

EDWARD ALVEY, JR.
Mary Washington College, University of Virginia

EGYPT. See UNITED ARAB REPUBLIC.

UPI

FORMER MOVIE STAR Shirley Temple Black campaigned (unsuccessfully) in California for a seat in U. S. Congress.

ELECTIONS

In a year without nationwide elections, returns from balloting in various states and cities in 1967 showed political unrest that disturbed established political patterns but provided no certain guide for candidates in 1968.

Weakening of Democratic strength in some major cities concerned leaders of that party and gave clear promise of a hard-fought presidential contest in 1968. Issues of law and order, racial tension, the war in Vietnam, inflation, taxes, and confidence in public leadership showed unmistakable signs of weighing more heavily with the voters than normal party allegiance.

CARL STOKES, shown with wife, won in Cleveland to become the first Negro elected mayor of a major U. S. city.

UPI

Congressional Elections. On March 28 a close vote in a special election in Rhode Island's usually Democratic 2d congressional district gave the vacant seat to Democrat Robert O. Tiernan. He polled 48.8% of the vote to 48.5% for James DiPrete, Jr., Republican mayor of Cranston, and 2.6% for a "peace" candidate. On April 11, Democrat Adam Clayton Powell, Jr., of New York won reelection to Congress after the House had denied him a seat. Powell did not present himself for the oath of office pending court tests of the power of the House to deny him membership.

Returns in a much-publicized special Republican primary election in California on November 14 gave Paul N. McCloskey 34.4% of the vote against 22.4% for Shirley Temple Black, the former child movie actress, who ran as a "hawk" on the Vietnam War. McCloskey won election in a December runoff.

State Elections. On January 10, by a vote of 182 to 66, the Georgia legislature elected Lester G. Maddox governor. As the Democratic nominee in the 1966 election, Maddox had received fewer votes than Republican Howard H. Callaway, but because of write-in votes for former Gov. Ellis Arnall no candidate had received the required majority. Joining the 30 Republicans in the legislature in voting for Callaway were 36 Democrats.

In Florida, Republicans increased their strength to 35% in the legislature in a special election on March 28. The election was ordered by a federal court because of legislative malapportionment.

Democratic voters in Louisiana's primary election on November 4 assured reelection of racially moderate Gov. John J. McKeithen, who faced no Republican opposition, by giving him more than a 4 to 1 lead over U. S. Rep. John Rarick, a segregationist.

Election of Louie B. Nunn on November 7—the first Republican elected governor of Kentucky since 1943—left Democrats with only 24 of the 50 governorships. In Mississippi on the same day former Rep. John Bell Williams, a segregationist Democrat, was elected governor by 70% of the vote, and Republicans lost their three seats in the legislature. New Jersey voters destroyed Democratic margins in both houses of their legislature, providing the Republicans with majorities of 3 to 1, sufficient to override all vetoes by Democratic Gov. Richard J. Hughes.

The state constitution drafted for New York by a Democratic-controlled convention was overwhelmingly rejected on November 7 by a margin of 2½ to 1. It was believed that a proposed repeal of a prohibition against state aid to church-related schools was largely responsible for the outcome. At the same time, voters approved $2.5 billion in bonds for New York state transportation construction. Pennsylvania voters elected a majority of Republicans to the state constitutional convention. Delegates to the Maryland convention were elected on June 13 without party identification.

City Elections. Democrats scored an easy victory in Chicago on April 4 with the election to a fourth 4-year term of Mayor Richard J. Daley, who polled 72.8% of the vote.

In city elections held on November 7, Negro Democratic nominees Carl B. Stokes and Richard G.

Hatcher won in Cleveland, Ohio, and Gary, Ind., respectively. They were the first of their race elected to the mayoralty in major American cities. In both cities, normally Democratic strongholds, margins were razor-thin, and voting based on race was sharply in evidence.

Boston's technically nonpartisan race for mayor pitted Mrs. Louise Day Hicks against Massachusetts Secretary of State Kevin H. White, both Democrats, in a campaign with racial overtones. Negroes strongly opposed Mrs. Hicks' record on racial issues, and White was elected with a margin of 12,000 votes. In Philadelphia, Democratic Mayor James Tate was narrowly reelected with strong labor support over Republican challenger Arlen Specter, the district attorney. Democrat Thomas D'Alesandro III, son of a former mayor, was overwhelmingly elected in Baltimore.

In Ohio, Democrat Maynard E. Sensenbrenner of Columbus and Republican John S. Ballard of Akron were reelected, and Democrat William Ensign overturned a Republican administration in Toledo. In Indianapolis, Richard G. Lugar became the first Republican elected mayor since 1951. In nonpartisan balloting, Joseph L. Alioto, a Democrat, was elected mayor of San Francisco; and J. Bracken Lee, former Republican governor of Utah, was narrowly reelected mayor in Salt Lake City.

FRANKLIN L. BURDETTE
University of Maryland

ELECTRICAL INDUSTRIES

The electric utility companies of the United States increasingly are calling on nuclear generating plants to help meet the growing demand for electricity in the late 1960's and the 1970's. During 1967 they placed 25 orders for the construction of large nuclear units. These units will have a total capacity of 22.2 million kilowatts—more than 18 times the capacity of electric company nuclear units in service in 1967.

Late in 1967 nine investor-owned nuclear power plants (totaling 1.2 million kw capacity) were in full operation in the United States and two more nuclear power plants (totaling 945,000 kw) had reached criticality. Nuclear power units under construction or design included two scheduled to begin operation in 1968, four in 1969, seven in 1970, 13 in 1971, and 10 more in 1972. In all, nuclear power equipment with a capacity of 43 million kw (some of it ordered before 1967) was scheduled for operation by all U. S. utilities by the early 1970's. (See also ATOMIC ENERGY.)

Orders for new generating equipment—thermal (steam) as well as nuclear—reached an all-time high as 1967 ended. The new equipment scheduled for operation by the early 1970's totaled 145 million kw—greater than the total U. S. electric capacity at the end of 1958. The schedules included 19 steam units of 1 million kw or more, and 115 steam units of 500,000 to 1 million kw.

Generation and Capability. Production of electric energy by U. S. investor-owned utilities, government agencies, and rural electric cooperatives in 1967 was 1.212 trillion kilowatt-hours, according to preliminary estimates of the Edison Electric Institute. This was more than 68 billion kw-hrs above the 1966 total, an increase of 6%. An additional 103 billion kw hrs was produced by railroads and industrial plants not contributing to the public power supply.

The total electric utility industry in the contiguous United States had an estimated 265 million kw of generating capability at year's end, an increase of 7.1% over the 1966 capability of 247.7 million kw. Over 200 million kw, or more than 75% of the 1967 capability, was provided by investor-owned companies. The rest was provided by government agencies and rural electric cooperatives.

The industry's annual margin of reserve capability in 1967 was estimated to be 20% over peak demand. The 1967 summer peak reached a record 213.5 million kw, 5% above the 1966 summer peak. Summer peaks have tended to exceed December peaks in recent years, largely because of the increasing use of air conditioning. The December peak in 1967 was 206.2 million kw.

Investment and Purchasing. Investor-owned electric companies had an estimated $70 billion invested in electric plant and equipment by the end of 1967. Expenditures for new construction by these companies during the year were estimated at a record $6.1 billion, or about 10% of the new construction expenditures by all U. S. business.

The investor-owned electric utilities purchased about 237 million tons of coal in the year—more than any other U. S. industry. They used about $2.35 billion worth of coal, oil, gas, and nuclear fuel, about 6% greater than the $2.21 billion worth bought in 1966. Increasingly efficient power plants have reduced the amount of coal needed to produce 1 kw-hr of electricity from 1.34 pounds in 1941 to 0.87 pounds in 1966.

Customers. About 1.3 million new customers were added by the electric utility industry in 1967, bringing the total to about 68.2 million. Of these, investor-owned companies were serving some 53.5 million by the year's end, or over 78% of all customers. About 95% of the new customers were residential.

The average use of electricity in the home rose to a record high 5,565 kw-hrs during the year, an increase of about 300 kw-hrs over 1966. The average price of residential electric service dropped from 2.20 cents per kw-hr in 1966 to an all-time low of 2.16 cents per kw-hr in 1967.

The Edison Electric Institute lists 166 basic appliances available to the U. S. homemaker. In 1966 some 58.6 million homes had refrigerators, 58.5 million homes had radios, and 57.5 million homes had black-and-white television sets.

Worldwide Generation of Electricity. According to preliminary data for 1965, the United States, with 6% of the world's population, produced almost 36% of the world's electricity. Its total production was almost 2.5 times that of the second-ranking nation,

WORLD PRODUCTION OF ELECTRICITY, 1965

Country	Production (millions of kilowatt-hours)[1]	Percent of world production
United States[2]	1,157,583	35.6
USSR	480,383	14.8
Britain	184,260	5.7
Japan[3]	181,942	5.6
West Germany	160,554	4.9
Canada	143,160	4.4
France	101,442	3.1
Italy	80,287	2.5
East Germany	49,958	1.5
Norway	48,950	1.5
Sweden	48,500	1.5
Poland	39,742	1.2
Other countries (est.)	575,936	17.7
Total	3,252,697	100.0

[1] Preliminary data. [2] Includes Alaska and Hawaii. [3] For the year ending March 31, 1966. (Source: U. S. Federal Power Commission.)

the USSR. About 5,950 kw-hrs were produced for each American in 1965, or almost three times the Soviet per capita production of 2,083 kw-hrs. By 1970, the United States is expected to produce about 7,555 kw-hrs per person, in contrast to a forecast average of 3,140 kw-hrs for each Soviet resident.

EDISON ELECTRIC INSTITUTE

ELECTRONICS

The electronics industry in the United States set a new sales record in 1967 as total factory sales rose to an estimated $23 billion, up 10% over the previous year. Since 1960, when sales totaled $10.7 billion, the industry has more than doubled the value of its output, according to figures compiled by the Electronic Industries Association.

In research and technology, the industry made steady but undramatic progress during the year. Advances were led by developments in computers, lasers, and electronic components.

Sales Breakdown. All major segments of the industry showed increases in sales in 1967. Sales of consumer electronic products rose from $4.6 billion in 1966 to $5.2 billion in 1967, mostly because of the rising demand for color TV sets. About 6 million sets were sold in 1967, compared with about 5 million sets in 1966. Sales of industrial products rose from $4.9 billion in 1966 to $5.7 billion, as more and more computing and data-processing equipment was shipped. Sales to the government, which purchases about half of the industry's output, climbed from $10.1 billion in 1966 to $112.2 billion, spurred by the rapid military buildup in Vietnam.

The 1967 gains were not as high as some had anticipated, especially in the nondefense areas, because of sluggish sales early in the year. Color TV sets, for example, did not sell as well as had been predicted. Sales picked up during the second half of the year, however.

Technical Developments. Computers were being put to so many new and different uses that it was predicted that their share of the gross national product in 10 to 15 years would be equal to or greater than that of the automobile industry. As examples of computer applications in 1967, the Florida state government installed a machine to keep track of the movement of thousands of pieces of legislation; the Illinois Central Railroad began using a computer system to control train, car, and power operations; and the Philadelphia public school district began using a computer-assisted instruction system. (See also AUTOMATION.)

The technology of lasers was developing rapidly, and there were several new advances in applications for lasers. A laser transmitting and receiving system for underwater use was built for the U. S. Navy. With this system, the laser beam can penetrate through several hundred feet of water. Another laser system was developed to vaporize minute portions of any material for spectrographic analysis; the laser can accomplish this without damaging the remainder of the material. A weapons fire-control laser radar was successfully tested. It was designed to locate and track terrain-hugging aircraft that might avoid detection by conventional radar systems.

The United States and France made a series of tests using satellites and laser beams. Laser light from the ground was beamed at reflector-equipped satellites to determine the location of points on earth within an accuracy of 4 inches (10 cm).

Researchers working on the development of lasers were trying to find new lasing materials to increase the power output of lasers and to lower costs. In the field of holography (a type of lensless photography that uses light from lasers), many laboratories were engaged in research aimed at finding industrial or commercial applications for holography.

Further progress was made in integrated circuits—the integration of electronic components in a single chip of semiconductor material. Large-scale integration—the interconnection of many circuits on one chip—began attracting more interest because it provided a less expensive way to fabricate some types of circuits. One use of the large-scale integration technique was for logic and memory circuits in computers.

In experimental work, researchers were studying the properties of materials to develop devices whose output would be at higher frequencies than those of transistors.

Military Developments. The Pentagon was increasing its demands on the electronics industry for equipment to be used in Vietnam. In addition, the barrier line that is being built between North and South Vietnam to prevent infiltration will require a wide array of electronic detection devices.

Maj. Gen. William B. Latta, commanding general, U. S. Army Electronics Command at Fort Monmouth, N. J., charged that the electronics industry was not fulfilling its obligations in supplying military electronic equipment. He said delivery of equipment at the scheduled time was his most pressing problem.

Social Developments. There was continuing concern over some of the side effects of electronics technology. William H. Stewart, the U. S. surgeon general, noted that there is an "emerging health problem with respect to electronic products." In August he called for legislation that would establish enforceable government standards for controlling radiation emissions from industrial, medical, and household electronic products, including TV sets. Shortly before Stewart's request, one manufacturer of color television sets had found that the tubes in some models emitted dangerous X-rays.

Some critics worried about the growing use of surveillance and eavesdropping devices, which depend largely on electronic techniques. Others thought that private computer data centers and the proposed federal computer data center represented threats to personal privacy because of the centers' ability to store many records and retrieve them rapidly. However, Emanuel R. Piore, vice president and chief scientist of the IBM Corp., told a Senate subcommittee that privacy rests not with machines, but with the men who use them.

Future Prospects. Prospects looked good for more business and more growth for the electronics industry in the years ahead. Government officials, top executives, and scientists were calling on the industry to apply its know-how to such areas as detecting crime, monitoring air and water pollution, educating the growing population, exploring the ocean, increasing safety on the highways and in the air, and gathering weather data. Another good prospect for the electronics industry was the building of more earth stations for use with communications satellites. An earth station uses an estimated $3 million of electronic equipment.

L. NICHOLAS TOLOPKO
"Electronic News"

EL SALVADOR • Information Highlights

SOUTH AMERICA

Area: 7,722 square miles (20,000 sq km).
Population: 3,037,000 (July 1, 1966 est.).
Chief Cities (1961 census): San Salvador, the capital, 255,744; Santa Ana, 72,839; San Miguel, 39,949.
Government: *President*—Col. Fidel Sánchez Hernández (took office July 1, 1967); *Vice President,* Humberto G. Cuestas (took office July 1, 1967). *Parliament*—Legislative Assembly, 52 members (party seating, 1967: Party of National Conciliation, 31; Christian Democratic party, 15; Party of Renovating Action, 6).
Religious Faiths: Roman Catholics, 97.7% of population.
Education: *Literacy rate* (1961), 50.8% of population aged 10 and over. *Total school enrollment* (1964)—435,172 (primary, 378,138; secondary, 35,539; teacher-training, 7,571; technical, 10,300; higher, 3,624).
Finance (1966 est.): *Revenues,* $100,400,000; *expenditures,* $112,120,000; *public debt* (1965), $23,208,000; *monetary unit,* colon (2.5 colones equal U. S.$1).
Gross National Product (1966), $794,400,000.
National Income (1966): $692,000,000; average annual income per person, $227.
Cost of Living Index (1967): 99 (1958=100).
Manufacturing (metric tons, 1966): Cement, 144,360; sugar, 120,000; gasoline (1965), 104,000; wheat flour, 38,000.
Crops (metric tons, 1966–67 crop year): Maize, 276,000; coffee, 126,000; cottonseed, 76,188; cotton (lint), 38,052; rice, 37,000; dry beans, 17,000; henequen, 3,035.
Minerals (metric tons): Salt (1965), 163,300; limestone and seashells (1964), 86,711.
Foreign Trade (1966): *Exports,* $192,760,000 (chief exports: coffee, $89,280,000; cotton, $22,400,000); *imports,* $219,960,000 (chief imports, 1965: nonelectrical machinery, $25,012,000; road motor vehicles, $15,064,000; textile yarn and fabrics, $13,032,000).
Transportation: *National roads* (1964), 4,940 miles (7,950 km); *motor vehicles* (1965), 35,046 (automobiles, 30,338); *railways*)1963), 378 miles (608 km); *principal airport,* San Salvador.
Communications: *Telephones* (1966): 19,882; *television stations* (1965), 3; *television sets* (1965), 35,000; *radios* (1965) 396,000; newspapers (1965), 15 (daily circulation, 127,000).

EL SALVADOR

The election and inauguration of Col. Fidel Sánchez Hernández as president of El Salvador and a border dispute with Honduras highlighted 1967.

Domestic Politics. On March 5, El Salvador, the most densely populated country of Central America, elected Colonel Sánchez to a nonrenewable 5-year term as president. He was the political heir of the outgoing president, Julio Adalberto Rivera, in whose cabinet he had held the post of interior minister. The successful candidate, promising social changes and political reforms along lines set by Rivera, campaigned on the slogan "Evolution in Liberty."

Colonel Sánchez, a member of the Party of National Conciliation, polled more votes than the three other candidates combined. Two of the opposition candidates, Abraham Rodríguez, of the Christian Democratic party, and Fabio Castillo, of the Party of Renovating Action, were termed by their foes as leftists—advocates of radical changes in the social and economic structure. The other candidate, Maj. Álvaro Martínez, led a small rightist group. Much name-calling and a few incidents characterized the heated presidential contest, in which approximately 40% of the registered voters cast ballots.

On July 1 the new president assumed office and announced the composition of his cabinet. Among the principal appointees were Vice President Humberto G. Cuestas, minister of finance; A. Martínez Moreno, minister of foreign affairs; and F. Armando Arias, interior minister. Promising to defend the nation against foreign threats, President Sánchez urged the armed forces not to underestimate foreign threats, especially Communist uprisings. He promised development at home and also pledged closer ties with the other nations of Central America. The president's attitude toward the United States undoubtedly will be influenced by his tour of duty as military attaché in Washington, D. C., in 1960–62.

Foreign Affairs. Charging that Honduran troops had penetrated 1 kilometer (0.62 mile) into El Salvador on June 2, the government put its armed forces in a state of emergency and ordered units to the border. Minor clashes occurred before meetings of a mixed military commission eased the situation.

At a meeting in Mexico City, El Salvador was one of 21 Latin American nations giving approval on February 12 to the final text of a treaty banning nuclear weapons from their region. Two days later 14 of the nations, including El Salvador, signed the treaty, which required ratification by 11 nations to become effective.

At the Third Special Inter-American Conference of OAS (Organization of American States) ambassadors, which was held concurrently with the OAS foreign ministers' meeting at Buenos Aires in February, the Salvadoran representative voted in favor of a reduction in Latin American arms budgets. In advance of the OAS summit meeting at Punta del Este, Uruguay, in April, attended by President-elect Sánchez, San Salvador hosted a meeting of Central American statesmen to study common economic problems, especially the coffee problem. At an OAS meeting in Washington, D. C., in September, El Salvador was a party to the unanimous condemnation of Cuban-inspired subversive efforts against Latin American nations. (See also LATIN AMERICA.)

During the Israeli-Arab conflict, El Salvador routinely backed the efforts of the United Nations.

FIDEL SÁNCHEZ HERNÁNDEZ, El Salvador's new president, with U. S. President Johnson at Punta del Este.

WIDE WORLD

OS UNIDOS
EL SALVADOR

Six Salvadoran deputies, representing three political parties in the national congress, visited Mexico in July and reaffirmed existing friendly relations.

Economy. In 1966, El Salvador was the only country in the Western Hemisphere in which consumer prices declined. In 1967, while striving for regional economic diversification at home, El Salvador remained conscious of its chief export, coffee. Santa Ana, the nation's second-largest city, reported having a coffee mill claimed to be the world's largest. Labor stoppages during the year included a bus drivers' strike in San Salvador in January and a brief general strike of 35,000 workers in April.

The eruption of the volcano Izalco early in the year proved to be a tourist attraction.

C. Harvey Gardiner
Southern Illinois University

EMPLOYMENT. See Labor.
ENGINEERING. See Bridges; Canals; Dams; Highways; Railroads; Tunnels.
ENGLAND. See Great Britain.

ENGLISH LITERATURE

The year 1967 was an excellent one in English literature. Biography and fiction remained plentiful and good, while both poetry and drama made strong recoveries from their 1966 doldrums. John Masefield, poet laureate since 1930, died in 1967.

Biography. It may well be that 1967 will be remembered as the year of the autobiography in English letters. Everybody seemed to be writing one. One of the first authors in the field was crusty old Hugh MacDiarmid with *The Company I've Kept,* which had a little something to offend everyone, but in general was well received. As *The Times* of London put it, "A smooth, well-documented autobiography from Hugh MacDiarmid would make us highly suspicious." A more suave performance was Harold Nicolson's *Diaries and Letters,* which was enormously popular with reviewers.

Also greatly appreciated was the *Autobiography* of Bertrand Russell, "in every way a splendid book," according to sociologist-author Barbara Wootton. Miss Wootton herself, a baroness who has been characterized as a distinguished "radical Establishment figure," won high praise for her book *In a World I Never Made.*

A number of large, continuing autobiographies brought forth new volumes. One of the best was *Downhill All the Way,* by Leonard Woolf, who further documented his life in the literary world of Bloomsbury and beyond, as well as the tragic story of his wife, Virginia Woolf. Graham McInnes, the brother of another author, Colin MacInnes, published the third volume of his life story, *Finding a Father.* Much of the book is concerned, in spite of its title, with McInnes' mother, the clever and formidable novelist Angela Thirkell. The way in which McInnes handled this rather difficult person won him praise and affection from the press. John Rothenstein's second autobiographical volume, *Brave Day, Hideous Night,* carried still further the story of his struggles at the Tate Gallery.

A late but important entry was Harold Macmillan's *The Blast of War,* the second volume of his autobiography. Reviewers agreed that the work should be read, but kept comparing it to Churchill's writings about the same era, with predictably unhappy results.

Two less ambitious autobiographies were Nicholas Monsarrat's *Life is a Four-Letter Word,* as long and erotic as his novels, but not so well plotted; and C. M. Bowra's *Memories,* a delightful book which does, however, refuse to document a famous anecdote about Bowra. When the sage was presented to Hitler, it is said, Hitler cried "Heil Hitler!" whereupon Bowra answered "Heil Bowra!"

Among biographies of special interest to Americans were Rae Jeff's *Brendan Behan: Man and Showman* and Frances Donaldson's excellent *Evelyn Waugh: Portrait of a Country Neighbor.*

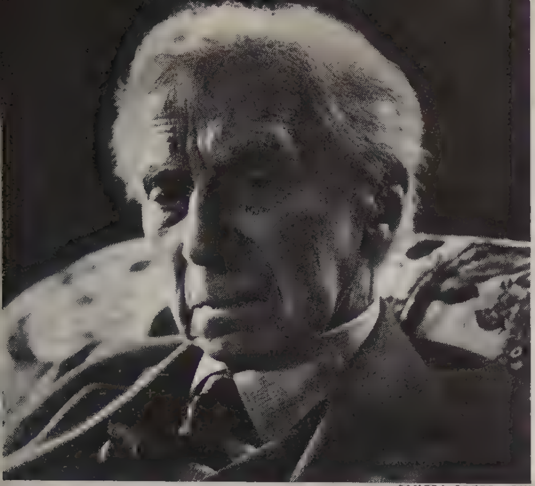
Fiction. A number of well-known novelists were productive in 1967. Rebecca West wrote *The Birds Fall Down,* the latest of Miss West's inquiries into the field of espionage, and the sort of philosophical adventure story at which the British have always excelled. The book was generally more successful in the United States than in England: the distinguished American critic Emile Capouya called it "fascinating," while the *Times Literary Supplement* (of London) rated it "bewildering."

Two novels by Colin Wilson, *The Glass Cage* and *The Mind Parasites,* led critic Robert Nye to comment, "For all his faults, he is one of the most earnest and interesting writers of his generation." *The Mind Parasites* is a lurid, science-fiction-like account of a great mental cancer that attacks human consciousness. *The Glass Cage* is simpler, if more violent; it features a Blake-quoting murderer.

One of the truly interesting British novelists is the maverick J. P. Donleavy, who is well known in the United States for his *The Ginger Man.* He wrote two new works in 1967, both of them characteristically strange: a novel, *The Saddest Summer of Samuel S,* and a collection of short stories, *Meet My Maker the Mad Molecule.* Samuel S is an aging American expatriate in Vienna, who remains indomitable in the depths of a rather turbid existence—he analyzes his psychiatrist and manages to keep at bay the women who offer him various easy solutions to his problems. The critics remain respectful although wary of Donleavy.

William Golding, another favorite with Americans, published *The Pyramid* in 1967. The novel, which was later released in the United States to enthusiastic reviews, is—as usual—deep and thought-provoking. It presents three incidents from the life of its small-town hero, Oliver; in each episode, Oliver fails someone who needs love. Golding is another writer by whom the critics are much fascinated, though puzzled. A more comfortable relationship was possible with J. B. Priestley, who is, as one reviewer put it, "still knitting very nice socks, thank you." The new novel, *It's An Old Country,* about an Australian boy going to England to find his father, didn't startle anyone, but neither did it detract from Priestley's solid reputation.

Among authors less well known to Americans, mention should be made of Peter Marshall, who wrote the novel *Excluded from the Cemetery.* The book opens with a shock: a slum woman, dying in the gutter, is approached by a grisly old man who promptly delivers her of a squalling infant. The man holds the baby up to its dead mother and says "Congratulations!" The work, said the *Times Literary Supplement,* "bristles with excitement and fecundity. . . . " Critics were also excited by Edward Caddick's novel *Hannah and the Peacocks,* which tells of an unglamorous, everyday London existence, but with great sensitivity and power. Other much-



CAMERA PRESS—PIX

BERTRAND RUSSELL'S autobiography, covering his youth, education, and first marriage, won high praise from critics.

PICTORIAL PARADE

HAROLD MACMILLAN'S autobiography, *The Blast of War,* suffered by comparison with Churchill's war histories.

admired novels were Angus Wolfe Murray's *The End of Something Nice,* which was hailed as ambitious and promising; Michael Frayn's book about the Fleet Street newspaper world, *Towards the End of the Morning,* considered a delicate, serious work; Hugo Charteris' vigorous work *The Coat;* and the talented second novel, *Winter Journey,* of Eva Figes (whom British critics have pointed out as a writer to be watched).

It was also a good year for short stories. Besides Donleavy's collection, there were offerings from Olivia Manning (*A Romantic Hero*) and Seán O'Faoláin (*The Heat of the Sun*), among others. Both of these collections were well received, though in Miss Manning's case there were a few politely smothered yawns. O'Faoláin, who, of course, was writing of the Irish, was highly praised for his subtlety and ingenuity.

Drama. The theater enjoyed a turbulent season, beginning with the Royal Shakespeare Company's production of *US,* perhaps the most controversial play of the year. The result of a collaboration among Dennis Cannon, Adrian Mitchell, Richard Peaslee, and Peter Brook, the play was an attempt, apparently, to grasp the whole horror and anguish of Vietnam. The ambiguous title *US* can be understood to mean the United States, but can also be interpreted, perhaps more appropriately, as the pronoun *us,* pronounced as an accusation. Contrary to what was believed in some quarters, the play did not spend itself in merciless satire of American policy, but commented fully on the venality and folly of the Vietnamese as well. The staging was sensational: a stage littered with junk and waste of war, dominated by a huge military figure with a great yellow bomb between his legs. Predictably, the play was as warmly praised in some places as it was excoriated in others.

William Gaskill's production of *Macbeth,* which followed soon after, was the occasion for another fine row. The critics did not mind the lack of scenery, or the fact that Negroes were cast as witches, but were reluctant to accept Negroes in the roles of murderers as well. Alec Guinness' Macbeth, however, was greatly admired. A play that evoked interest later in the season was John Bowen's latter-day account of Noah's flood, *After the Rain,* which featured an outstanding performance by Alec MacCowen as the little man who saves the situation.

The theater itself was the object of satire in David Halliwell and David Calderisi's *The Experiment,* the story of a famous director who decides to put on a "non-play" concerning what he considers a meaningless subject, the assassination of President

THE ROYAL SHAKESPEARE COMPANY'S production of *US,* an attack on the terrifying destructiveness of the Vietnam War, brought controversy to the theatrical season.

JESSE ALEXANDER, FROM NANCY PALMER

Garfield. The director has chosen this particular subject, he explains, because it is a case in which a nonentity was assassinated by a nonentity, with no effect whatever on history. From this point, the play wends its way through a highly diverting and meaningful parody.

Two other new plays drew the attention of the critics. These were David Mercer's *Belcher's Luck,* a commentary on the changing order in Britain, and Charles Dyer's *The Staircase,* a sketch of two aging homosexual barbers in a London suburb.

The pace did not slow down as the summer theater season arrived. An engaging farce by Harold Brooke and Kay Bannerman, *Let Sleeping Wives Lie,* was well received, as was Hugh and Margaret Williams' comedy of manners, *The Flip Side.* More ambitious and perhaps less successful was Robert Shaw's *The Man in the Glass Booth,* which deals with the guilt of the concentration camps. It features as hero—or antihero—a fugitive from the camps, who may be either a victim or a Nazi guard; a certain amount of ambiguity seems to be part of the author's purpose.

Finally, there was an import from Scotland that packed quite a punch: Peter Nichols' *A Day in the Death of Joe Egg.* Audiences were taken aback at finding the heroine "a beautiful but mindless girl-child, a spastic living-corpse." However, in spite of its initial shock impact, the play was widely praised for its tact and delicacy in depicting the girl's situation and the problems caused for her parents, a couple in early middle age.

Poetry. Poetry awoke from its yearlong slumbers in 1967. Hugh MacDiarmid, in addition to his autobiography, and in spite of a terriffic brawl some two or three years ago on the subject of plagiarism, brought out his *Collected Poems.* The 75-year-old author warned the public that the collection did not comprise his complete works, and substantiated his claim by publishing a second volume of verse, *A Lap of Honour,* which he proceeded to rate among his best work.

Ted Hughes, who has been called "the best British poet since Dylan Thomas," also published a new book of poetry, *Wodwo,* which had Hughes' characteristically mystifying effect on the critics, though they granted the poet his excellence. The less esoteric, highly popular John Betjeman brought out *High and Low.* Some critics carped at the public's misunderstanding of Betjeman's work, but as the *Times* summed it up, "All pieces give some degree of pleasure."

Other well-known writers, like Lawrence Durrell, did not come off so well. *The Ikons* was criticized for its platitudes and clumsiness, and one reviewer declared that Durrell's "vein of charm has run out." The critic Geoffrey Grigson tried his hand at poetry in *A Skull in Salop,* and was advised to stick to his last.

Some lesser-known poets enjoyed more success. Martin Bell's *Collected Poems* were commended for their acute social observation; George MacBeth's *Colour of Blood* was found wild and exciting; and David Wevill was highly praised for his fine, sensitive poems in the beautifully titled *A Christ of the Ice-Floes.* A word should also be said in honor of Elizabeth Jennings, who published her *Collected Poems,* greeted as substantial and impressive.

The year 1967 was a grand one for the reputation of the late T. S. Eliot, whose reassessment continues at a brisk rate. The definitive biography is still awaited, but new editions pour out, including the much-valued *Poems Written in Early Youth.*

John Masefield, England's poet laureate for 37 years, died on May 12, at the age of 88. Masefield was best known for his early realistic poems, particularly about the sea. Cecil Day Lewis, a poet who writes mysteries under the pseudonym Nicholas Blake, was named new poet laureate on Jan. 1, 1968.

CHARLES ALVA HOYT
Bennett College, Millbrook, N. Y.

EPISCOPAL CHURCH

The Episcopal Church operates on a triennial pattern, established by the meetings of its General Convention. In 1967 the 62d General Convention met for 10 days—September 17–27—in Seattle, Wash.

The bulk of the substantive matters dealt with by the General Convention originated either with the Executive Council, the interim executive instrument of the Church, or with the several joint committees and joint commissions created by the previous Convention.

Unquestionably, the most significant action of the General Convention was its adoption of a program and supporting budget in which the highest priority is given to ordering the Episcopal Church's response to the problems in American life dramatized by the violence in the nation's cities during the summer of 1967. In the words of Presiding Bishop John E. Hines, this will be "a program . . . by which this Church can take its place, humbly and boldly, alongside of, and in support of, the dispossessed and oppressed peoples of this country for the healing of our national life."

The adoption of the special program required a radical readjustment of other portions of the Church's budget so that its normal activities can be adequately maintained.

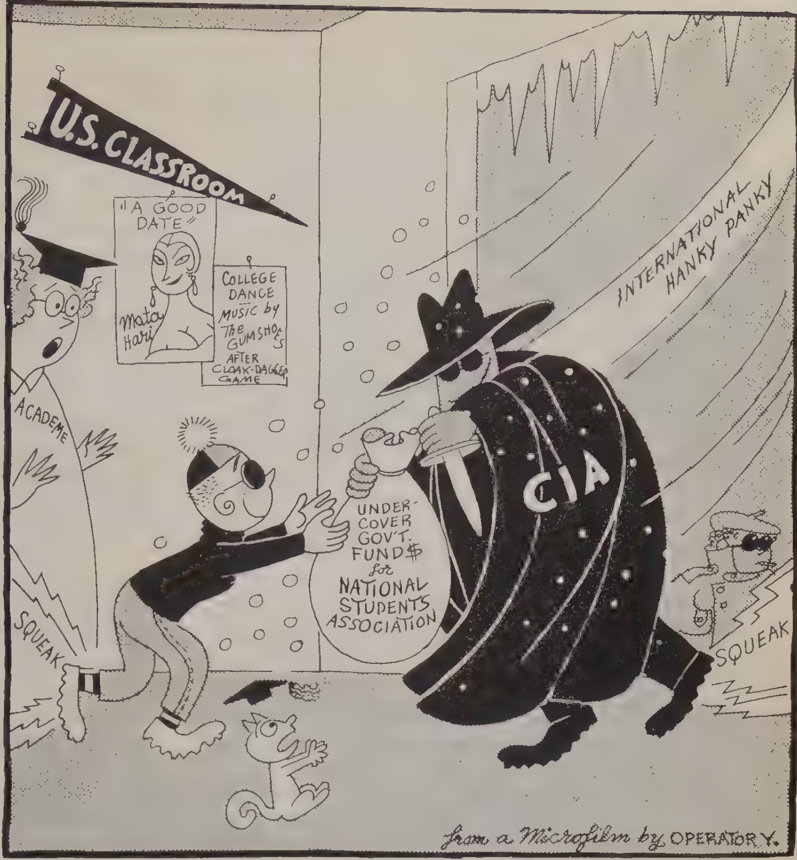
Liturgical Change. A second major decision of the General Convention was to begin a process of revision of its liturgical formulary, the *Book of Common Prayer,* last revised in 1928. As a first stage of the revision, a proposed *Liturgy of the Lord's Supper,* in preparation for 10 years, was authorized for a 3-year period of trial usage.

Ecumenism. In the ecumenical field, the Convention approved the continued participation of the Episcopal Church in the Consultation on Church Union (a group of 10 Protestant denominations working toward unity and eventual consolidation), and endorsed continued explorations of various kinds into relationships with other Christian bodies.

Vietnam. The General Convention debated at length the Episcopal Church's position with regard to the war in Vietnam, eventually producing a statement that called for restraint by the United States in the conduct of the conflict, and the development of "fresh, new ideas about alternative possibilities" in the search for a just and durable peace. The Convention reaffirmed the Church's support for the rights of conscientious objectors, and called for a broadening of the law to include objectors who base their position on other than religious grounds.

CHARLES M. GUILBERT
Secretary, The Executive Council
Episcopal Church Center

ESPIONAGE AND INTELLIGENCE


U.S. CLASSROOM
"A GOOD DATE"
Mata Hari
COLLEGE DANCE MUSIC by The GUMSHOES AFTER CLOAK-DAGGER GAME
ACADEME
INTERNATIONAL HANKY PANKY
CIA
UNDER-COVER GOV'T. FUND$ for NATIONAL STUDENTS ASSOCIATION
SQUEAK
SQUEAK
from a Microfilm by OPERATOR Y.

YARDLEY IN THE BALTIMORE SUN

'The Spy who Came in out of the Cold' is a cartoonist's reaction to the disclosure early in 1967 that the Central Intelligence Agency had been subsidizing programs of the National Student Association for some 15 years.

ESPIONAGE AND INTELLIGENCE

The 20th anniversary of the U. S. Central Intelligence Agency (CIA) was observed on Sept. 18, 1967. On that occasion, Vice President Hubert Humphrey, at the agency's headquarters in Langley, Va., personally delivered President Johnson's birthday message stating that the world "is a better place . . . because there has been, there is, and will continue to be a CIA."

During its 20-year existence, the CIA has often received less laudatory comment. It has been the object of suspicion, doubt, and fear. Suspicion has arisen from a traditional American repugnance for forms of "invisible government" and from a vague awareness that since 1947 the United States has created a vast bureaucracy for intelligence and espionage activities. Doubt derives from uncertainties about whether a democratic society needs to operate a secret apparatus engaged in espionage and various forms of political warfare, associated in the past with totalitarian governments. And fear has been a byproduct of secrecy and public ignorance about the purpose, organization, and functions of the "intelligence community."

Some critics have charged that the CIA, operating behind its high wall of secrecy and dispensing an enormous but secret amount of money, threatens to become a "state within a state" lacking adequate controls by responsible political authority. Still others believe that the United States has resorted to secret operations too frequently without adequately calculating risks or costs against benefits. Many prominent Americans have argued that the United States as a great power has the pragmatic necessity of maintaining an apparatus for secret operations in a revolutionary world. Others take the position that even if this is so, the failures and exposures of its secret operations have transformed the CIA into such a foreign policy burden that major changes are required in its organization and role. The "CIA problem" has remained unresolved for 20 years.

THE CENTRAL INTELLIGENCE AGENCY

The CIA was created by Congress in the National Security Act of 1947 as part of the "unification" of the defense establishment derived from the lessons of World War II. It became the first separate foreign intelligence agency in American history. The CIA was made responsible to the President and the National Security Council (NSC). The agency's basic constitution is the statute that created it and a set of National Security Council secret directives, spelling out its role and jurisdictional authority in a larger "intelligence community."

The CIA is but one of a half-dozen major intelligence units, including the Pentagon's Defense Intelligence Agency, the National Security Agency, the Bureau of Intelligence and Research in the State Department, foreign intelligence units in the Atomic Energy Commission and the Federal Bureau of Investigation (which has no major overseas functions), and the intelligence services of the army, navy, and air force. Other departments, such as the treasury and post office, also have some intelligence functions. Some estimates have placed the annual governmental cost of intelligence in recent years at $4 billion.

Functions of the CIA. The director of the CIA (Richard Helms, appointed in 1966, was the sixth) is also "director of central intelligence" and as such is the president's principal intelligence adviser and the NSC's intelligence adviser. As chairman of the U. S. Intelligence Board he is also coordinator of foreign intelligence activities. If statutes seem to assign to the CIA only functions related to intelligence (information), the agency has evolved into a multiple-function organization, including not only informational missions, but also covert and clandestine political and paramilitary warfare in various overseas areas. Such disclosures as those that followed the downing of an American U-2 plane deep within Soviet territory (1960), the Bay of Pigs disaster (1961), and later events in Laos, Vietnam, the Congo, and other areas, demonstrated clearly that the CIA was engaged in covert political activities, some having little to do with intelligence.

The NSA Controversy. Not until 1967, however, did the public and Congress become aware of the scope of the agency's involvement with private domestic organizations. Earlier, some public knowledge existed about the CIA's special ties with a few private foundations, university research centers, book publishers, and some labor organizations. But details were vague until February 1967, when *Ramparts* magazine disclosed the specifics of CIA's subsidy for nearly 15 years of the overseas programs of the National Student Association (NSA), a student-run organization comprising more than 300 member colleges and universities in the United States.

Between 1952 and 1967, it was later learned, the NSA received more than $3.3 million in secret CIA subsidies for its international programs. In 1962, 91% of NSA's total budget was supplied by the CIA, through "front" and "conduit" foundations. Money was provided primarily to enable the United States to be represented by college students at various international youth conferences overseas in which the Communist movement was strong.

Similar subsidies, it became known, were provided by CIA to dozens of other private organizations—including academic, labor, church, legal, and literary groups—for their overseas programs. Defenders of such programs argued that they were necessary expedients in the cold war, that the Communists had to be fought on their own terms.

Reactions to these disclosures varied widely. There were calls for congressional investigations, for reorganizing the CIA, and even for abolishing it. Most observers, including CIA's defenders, admitted that the publicity had further damaged CIA's image and created new complications for American students and researchers working overseas. CIA's defenders pointed out that such programs resulted from policies determined at the highest levels under all presidents since Truman. Some of CIA's harshest critics, such as columnist Walter Lippmann, acknowledged the need for a central intelligence agency but argued that its functions should be confined to gathering foreign information.

Recommendations. Responding to an avalanche of congressional, editorial, and public criticism, President Johnson ordered that CIA financing of the National Student Association be ended. On February 15 he appointed a 3-man committee to review the secret subsidy programs. Under Secretary of State Nicholas Katzenbach served as chairman; others were Secretary of Health, Education, and Welfare John Gardner, and CIA Director Richard Helms. A public version of the committee's report was released on March 29, 1967, accompanied by a presidential statement accepting the committee's findings. The President promised serious consideration of the recommendation "that the Government should develop and establish a public-private mechanism to provide public funds openly for overseas activities. . . ." With this end in view, the President appointed Secretary of State Dean Rusk to head an 18-member committee comprising public and private representatives to make more specific recommendations.

The Katzenbach committee recommended, and the President accepted, a policy statement that "no Federal agency shall provide any covert financial assistance or support, direct or indirect, to any of the nation's educational or private voluntary organizations." Any existing support was to be terminated by the end of 1967. Future exceptions to such a policy might be permissible "only where overriding national security interests so require" and on specific approval by the secretaries of state and defense. But, in the committee's most pointed reference to the whole scandal: "In no event should any future exception be approved which involves any educational, philanthropic, or cultural organization."

DEVICES AND TECHNIQUES

Despite all of the controversy about the CIA's secret subsidies, such activities represented but a tiny fraction of the government's secret operations. Most of the subsidy programs had little connection with intelligence functions, representing rather foreign political action or psychological warfare.

Technological Advances. A massive program of intelligence and espionage has evolved over the past 20 years as a result of the U. S. effort to utilize technology to bring the whole world under surveillance. Orbiting satellites, rapid advances in photographic equipment and sensing devices, and computer technology are radically changing the nature of intelligence systems. Code breaking, for example, is one of the most important and least publicized techniques of modern espionage.

Specific details of many developments are not easily obtainable. But it is known that numerous orbiting devices are in use, such as "ferrets" for electronic eavesdropping and instruments capable of monitoring conversations on the other side of the globe. Similar ground- or ship-based devices are even more extensively used, so that governments may try to keep under surveillance the widest range of electromagnetic emissions. Few subjects are more secret than some of the details of these international ELINT (electronic intelligence) programs, although techniques for local eavesdropping or surveillance are well known.

For certain kinds of covert missions, the U-2, a high-altitude jet aircraft, has been used extensively, even after its exposure in May 1960 when one was brought down deep within the Soviet Union. Since then, the U-2 has been known to be used by Chinese Nationalists for flights over mainland China. A successor to the U-2, the twin-jet SR-71, also built by Lockheed but capable of much greater speed and altitude and of carrying more sophisticated spying instruments, has been developed.

Aerial Reconnaissance. Meanwhile, the Samos satellite, an orbiting "spy in the sky," has been routinely placed in orbit, once a month for several years. Samos satellites have brought virtually the whole world into the range of their cameras and other detection devices. For example, a multispectral camera aboard the Samos employs several lenses at the same time and may use film sensitive to infrared light, making it difficult to conceal almost any form of human activity on the ground. After a week of orbiting, the Samos photographic "take" is ejected over a designated spot in the Pacific Ocean, where it is either caught in midair by special aircraft or retrieved from the ocean.

In addition to optical cameras, various electronic scanning devices are in wide use, ranging from radar to thermal sensors. The latter can detect from great heights such things as Vietcong campfires in a jungle or the heat from a jet plane hours after it has flown away. Computers have been of additional assistance. Deductions from evidence revealed in photographs or other sources can, with the use of high-speed computers, allow for accurate estimates of factory production, missile launchings, economic growth rates, and a wide range of strategically important information. For example, photographs of crops, floods, drought areas, or diseased plants give excellent capability to predict a nation's productivity.

The Soviet Union also has major programs for aerial reconnaisance by both orbiting satellites and conventional aircraft. For example, Soviet satellites of the Cosmos series have been flying over the United States since 1962 in orbits indicating intelligence missions.

INTELLIGENCE IN OTHER COUNTRIES

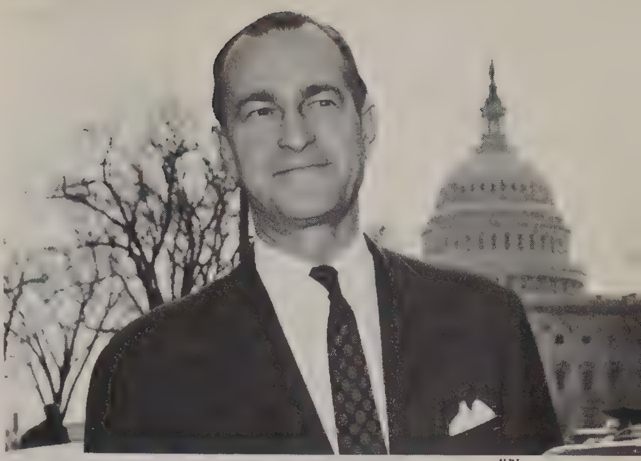
All modern nations maintain highly organized intelligence systems. Most developing nations aspire to them. The dominant models are the systems of Britain, the Soviet Union, and the United States. Constitutional differences greatly affect the nature of any particular system. One universal principle is that secret services try to remain anonymous.

Britain. The basic structure of British intelligence dates back to Queen Elizabeth I. Today it is centered in two main civilian organizations, commonly confused in the public mind and even more commonly—if incorrectly—referred to by their former military designations of MI-5 and MI-6. The more accurate name of MI-6 is Secret Intelligence Service (roughly the equivalent of the American CIA). However, its director—"C" in official slang—does not possess the federal coordinating authority held by the CIA chief, nor the vast research and analysis organization.

MI-5, the other principal service, more accurately called the Security Service, is under a director general known as "K." This service is responsible for internal security and is roughly equivalent to the American FBI, although much more anonymous in its leadership, organization, and operations. Unlike the FBI, however, it performs overseas counterintelligence functions.

The intelligence community in Britain also includes a defense intelligence staff in the Ministry of Defence, which is one of the most important arms of British intelligence, and a communications intelligence unit, concerned with codes and electronic intelligence. All of these and more specialized subagencies operate under the supervision of a Joint Intelligence Committee, a defense subcommittee of the cabinet, under the chairmanship of a top Foreign Office official.

The year 1967 marked a turning point in the British system as two events challenged its secrecy and reputation for cool efficiency. One was the breakdown of the "D-Notice" system under which the press had cooperated with the government to maintain secrecy for the secret services. For the first time the press published facts about the intelligence operations. The other was disclosure of many details of the case of H. A. R. Philby, who from 1940 to 1954 had been both an important official of the British Secret Service and a Soviet agent.


UPI

RICHARD HELMS was appointed director of the Central Intelligence Agency in 1966. He is principal intelligence adviser to the president and the National Security Council.

Soviet Union. The Soviet Union operates a vast intelligence system resembling that of the United States and Britain, but differing in a major respect. The resemblance is the maintenance of a large civilian, as well as a separate military, foreign intelligence service. More importantly, the difference is that the Soviets combine all intelligence, foreign and domestic, under the control of the centralized KGB (Komitet Gosudarstennoi Bezopasnosti, or "Committee of State Security"). It is as though the American CIA, FBI, Secret Service, Defense Intelligence Agency, and more were combined.

The precise relationship, however, between KGB and its civilian foreign intelligence arm, and GRU (Glavnoye Razvedyvatelnoye Upravlenie, or "Chief Intelligence Administration"), which is the military foreign intelligence arm, is not clear. Some evidence exists of past civil-military friction. The Soviet system doubtless has not been immune from the rivalries normally affecting governments with competing intelligence systems.

Other Systems. Much less detailed information is available about other major nations. The intelligence systems of Japan, Nationalist China, West Germany, South Korea, and South Vietnam resemble that of the United States. Western European (excepting that of West Germany) and Middle Eastern systems more closely resemble the British; in Communist countries the Soviet system has been the model.

The intelligence system of Communist China is subdivided into four major compartments—that of the party, of the defense ministry, of the foreign office, and of the state council, or government. Each checks on the other, with the party, through the Politburo and its "social affairs department," attempting to exercise dominant overall controls. In the turmoil that shook China in 1967, the several intelligence services were deeply embroiled. The struggles of Mao Tse-tung to guide the continuing Chinese revolution may be pivotally determined by his ability to control the secret services.

Harry Howe Ransom
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WIDE WORLD

ETHIOPIAN EMPEROR Haile Selassie and President Johnson in front of the White House in Washington on February 13.

ETHIOPIA

Ethiopian affairs in 1967 were dominated by a significant rise in Eritrean separatist activity and an increase in border difficulties with Somalia and the Sudan. The year was also notable for the visits of Emperor Haile Selassie to a number of countries, including the United States, and the steadily improving Ethiopian economy.

Eritrean Separatists. Separatist activity in the northern province of Eritrea has been growing since 1962, when the former Italian colony ceased to exist as an autonomous unit under the Ethiopian crown. Primarily Muslim, and tacitly supported by Saudi Arabia and Syria, the Eritrean guerrillas (Eritrean Liberation Front) resorted to terror tactics in 1967 in an effort to gain independence. After a general pardon offered to the rebels in July was ignored, federal troops began to act against the rebels in August. Raids on villages caused several thousand sympathizers of the Front to flee to the Sudan.

Border Disputes. Trouble flared between Ethiopia and the Sudan over the cultivation of farming areas claimed by both sides. Several incidents near Falasha between the Setit and Atbara rivers culminated in an announcement by the Sudanese in May that troops had been sent to the frontier to counter an "aggressive build-up."

Ethiopia's relations with Somalia took a turn for the worse as both countries massed troops on the French Somaliland border during a national referendum in March to determine that colony's future. Friction with Somalia also reflected the fact that parts of the Somalia frontier have never been satisfactorily delineated, and that Somalia has been receiving large Soviet arms shipments.

Haile Selassie's Travels. Emperor Haile Selassie arrived in the United States on February 13 on the first stop of a three-week tour that included stopovers in the Soviet Union, Turkey, and the Sudan. During his U. S. stay he discussed with President Johnson the tense situation with Somalia and sought additional American military aid. The emperor also offered his services as a peace mediator between countries fighting in Vietnam. In May the emperor consulted briefly with political leaders in France and Germany, and in September he attended a summit conference of the Organization of African Unity at Kinshasa, capital of the Democratic Republic of Congo.

The Economy. The Ethiopian economy in 1967 showed signs of recovering from the severe drought in 1965. The crop outlook was much brighter, and a narrowing of the foreign trade gap, based on expectations of larger exports and a lessened need for emergency food imports, was forecast. Ethiopia's international liquidity position appeared to have stabilized in the first half of 1967. Domestic bank credit continued to expand rapidly. In Addis Ababa, construction began on the 250-room Addis Hilton Hotel scheduled for completion in early 1968.

In January 1967, Ethiopia completed the latest in a series of hydroelectric dams for harnessing the Awash River. In July the International Finance Corporation (IFC), an affiliate of the World Bank, announced a commitment for $9 million as part of a total financing of $22.5 million to expand Ethiopia's sugar cultivation and processing facilities.

ERNEST W. LUTHER
Economist; Author of "Ethiopia Today"

ETHIOPIA • Information Highlights

ASIA
AFRICA

Area: 471,776 square miles (1,221,900 sq km).

Population: 23,000,000 (July 1, 1966 est.).

Chief Cities (1963 est.): Addis Ababa, the capital, 560,000 (1965 est.); Asmara, 120,000; Dessie, 56,400; Harar, 42,700.

Government: *Emperor*—Haile Selassie I (proclaimed emperor Nov. 2, 1920); *Prime Minister*—Aklilou Hable-Wald (took office April 17, 1961). *Parliament*—Chamber of Deputies 250 members (elected); (name of 2d house:) Senate, 160 members (appointed).

Religious Faiths: Ethiopian Orthodox, 90% of population.

Education: *Literacy rate* (1963), 5% of population. *Total school enrollment* (1964)—397,084 (primary, 347,770; secondary, 40,334; teacher-training, 1,828; technical, 5,509; higher, 1,643).

Finance (1965–66 est.): *Revenues*, $119,200,000; *expenditures*, $179,680,000; *monetary unit*, Ethiopian dollar (2.50 dollars equal U. S.$1).

Agricultural Production (Index 1965): 122 (1952–1956=100).

Manufacturing (metric tons, 1965): Cement, 95,000; sugar (1966), 77,000; wheat flour, 35,000; beer (1964), 15,700; lumber, 51,000 cubic meters.

Crops (metric tons, 1966–67 crop year); Sorghum, 3,128,000; barley, 820,000; maize, 740,000; chick peas, 173,000; dry peas, 119,000; dry broad beans, 110,000; coffee, 102,000.

Minerals (metric tons, 1965); Salt, 188,000; lime, 4,000; manganese ore (1964), 3,248; gypsum, 2,500; gold, 24,236 troy ounces; platinum, 352 troy ounces.

Foreign Trade (1966): *Exports*, $111,000,000 (chief exports: coffee, $62,400,000; hides and skins, $14,120,000; oilseeds, $8,720,000; cereals, $8,600,000); *imports*, $161,680,000 (chief imports, 1965: transport equipment, $24,557,200; nonelectrical machinery, $22,652,400; textile yarn, $17,378,400; petroleum products, $9,326,800). *Chief trading partners* (1965): U. S. (took 55% of exports, supplied 11% of imports); Italy (took 6% of exports, supplied 18% of imports); Japan (took 2% of exports, supplied 15% of imports).

Transportation: *Roads* (1964). 14,292 miles (23.000 km); *motor vehicles* (1965), 32.875 (automobiles, 23,950); *railways* (1965), 423 miles (681 km); *merchant vessels* (1966), 5 (35,000 gross registered tons); *national airline*, Ethiopian Air Lines; *principal airports*, Addis Ababa, Asmara.

Communications: *Telephones* (1966). 24,791; *television sets* (1965), 2,500; *radios* (1964), 325,000; *newspapers* (1965), 8.

EUROPE

The year 1967 was not one of major happenings in Europe. Various events portended considerable changes, but those changes did not occur during the year.

In some respects the pace of change in Europe slowed down. For example, the rapid rise in productivity and consequent prosperity that characterized Europe for a decade before 1966 had reached a point in 1967 where productivity had stopped climbing in most countries.

That was the general rule. Several countries were exceptions to it, and some indications of a general upturn appeared in the last quarter of the year. Although it was far from vigorous, the British economy did better in 1967 than in 1966, and notwithstanding defeat in by-elections, the Labour government continued to seek an economic cure before the next scheduled general elections in 1971.

NATIONAL AFFAIRS

A major but not novel element of the European scene in 1967 was the intransigence of French foreign policy as shaped by President Charles de Gaulle.

France and its Neighbors. One striking result of de Gaulle's policy during the year was the elimination from France of U. S. troops and NATO military and civil headquarters (see also NORTH ATLANTIC TREATY ORGANIZATION). Another was the temporary success of his clearly demonstrated opposition to the prospective enlargement of the European Common Market. De Gaulle's obvious desire to have France dominate European developments was a source of irritation to the other market states, but the only one of them whose views France has to take seriously—West Germany—showed all too clearly that it would not oppose French policy with vigor. It was apparent that West Germany would continue to indulge French objections to Britain's membership in the Common Market as long as indulgence was the price of Franco-German cooperation in other matters.

De Gaulle's visit to Poland in September provided further evidence of the amount of tact that West Germany must exercise to retain French cooperation. The French president's references to the Polish character of former German towns east of the Oder-Neisse elicited official German protests, but weaker ones than might have been anticipated. In contrast, de Gaulle's flattering suggestion to the Poles that they adopt a more independent foreign policy was explicitly rejected by the Polish government.

Sterling Devaluation. After months of speculation that culminated in a virtual run on the pound, Britain announced on November 18 that it was devaluing its currency by 14.3% (see INTERNATIONAL FINANCE).

Eastern European Countries. Trade and other contacts between eastern and western Europe increased in 1967. In fact, the Common Market's trade with eastern Europe increased faster than its overall trade with non-Communist states.

NATO PHOTO

NEW HEADQUARTERS for SHAPE were officially opened near Casteau, in southern Belgium, on March 31. By French demand, SHAPE was required to leave France by April 1.

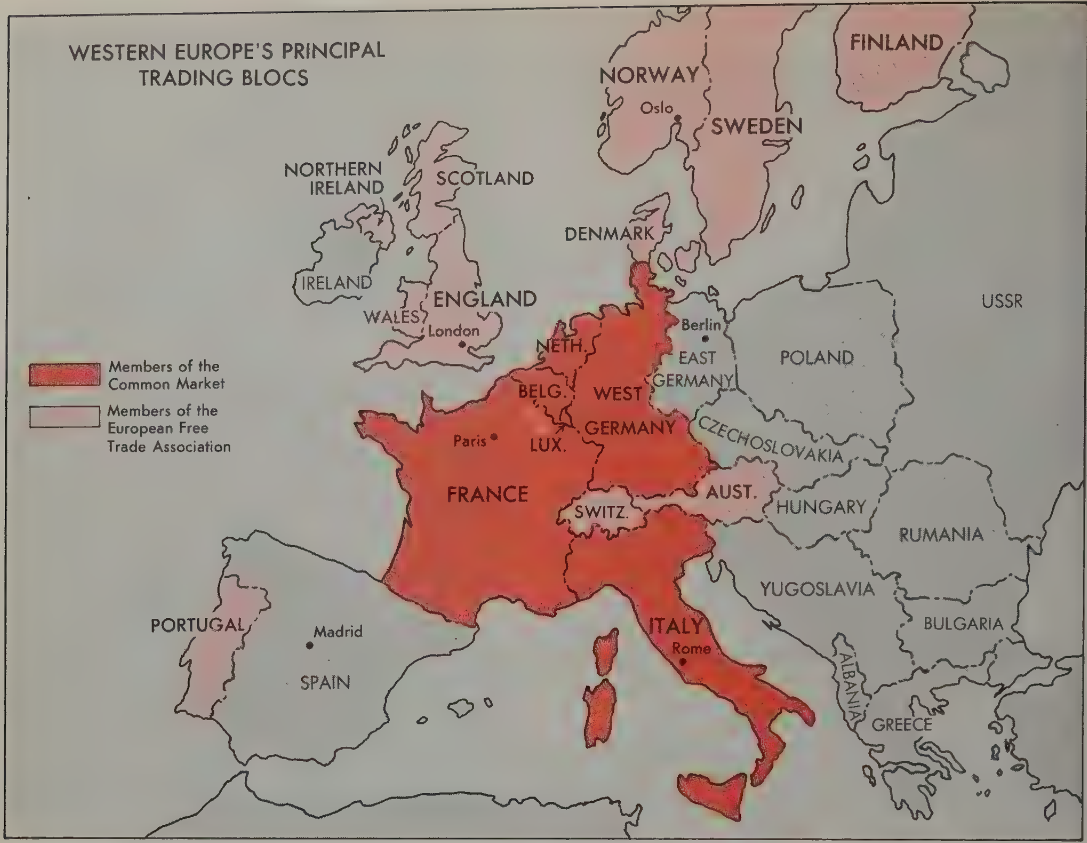
Establishment of diplomatic relations between Rumania and West Germany in February represented a considerable break with doctrine on both sides and provoked acrimonious discussion at a meeting of Warsaw Pact countries in Warsaw the same month. The move was welcomed in western Europe and the United States and encouraged commentators to assume that the differences between Communist East and non-Communist West were about to disappear painlessly. The assumption was naïve and unfounded. Although the Communist states of eastern Europe differ from one another, and the USSR no longer completely controls them, they remain Communist dictatorships, in which individual liberty is minimal.

Spain. In Spain—a dictatorship of another kind—the concessions to political freedom were also few. Organized labor planned a nationwide protest in October against a steeply rising cost of living, but its plan was rudely disrupted by the government.

Greece. Democratic government in Greece—long characterized by corruption, poor administration, and instability—succumbed to a military coup on April 21. There was strikingly little effective opposition to the coup or to the subsequent rule of a junta.

SUPRANATIONAL AFFAIRS

The three functional European communities—the European Economic Community (EEC), the European Coal and Steel Community (ECSC), and the European Atomic Energy Community (Euratom)—all of which have the same 6-nation membership (France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg), remained poised


WESTERN EUROPE'S PRINCIPAL TRADING BLOCS
Members of the Common Market
Members of the European Free Trade Association
NORWAY
Oslo
FINLAND
SWEDEN
NORTHERN IRELAND
SCOTLAND
DENMARK
IRELAND
ENGLAND
WALES
London
USSR
Berlin
NETH.
EAST GERMANY
POLAND
BELG.
WEST GERMANY
CZECHOSLOVAKIA
Paris
LUX.
FRANCE
AUST.
SWITZ.
HUNGARY
RUMANIA
YUGOSLAVIA
PORTUGAL
Madrid
SPAIN
ITALY
Rome
BULGARIA
ALBANIA
GREECE

throughout most of 1967 at a very interesting and critical point in their histories. Their future will affect the whole western European picture, because the combined organization of "the Six" is capable of absorbing the European Free Trade Association (EFTA) that links the "outer seven" (Austria, Britain, Denmark, Norway, Portugal, Sweden, and Switzerland). Amalgamation could end the breach that divides free Europe into two trading blocs. Union or increasing division appear to be the alternatives.

The year was important as well for internal organization of the communities. On July 1 provisions of the Brussels Treaty of April 8, 1965, went into force, obliging the signatories to effect a partial merger of the three organizations by establishing a single Council and a single Commission. The three separate executive offices were supplanted by a 14-man European Commission nominated by the Council and installed on July 6.

Several well-known figures were deprived of office in the shift—notably Walter Hallstein of West Germany, the very active former head of EEC. The new Commission is headed by President Jean Rey (Belgium) and Vice Presidents Raymond Barre (France), Fritz Hellwig (Germany), and L. L. Sandri (Italy).

The merger of the three executive offices is regarded as merely a step in the direction of unifying the three communities. That, however, will require redrafting the three basic treaties, a process likelier to take years than months.

European Economic Community. The possibility of an enlarged EEC demanded the attention of all Common Market member-states throughout the year. On May 11, Britain applied for membership in the market, and shortly thereafter Ireland, Denmark, and Norway did too. Sweden applied for as close an association as is compatible with its neutrality.

The negotiations among the Six about how to treat the applications began in the fall, but in the face of skillful French obstructionism they made very little progress. The difficulties involved in enlarging the community would have been serious even without French opposition, and the negotiations appeared likely to be so protracted that anything like the French veto of 1963 would be unnecessary.

On October 2 the report of the special committee appointed by the (former) EEC Commission to consider the problems raised by the British candidacy was published. The report concluded that "negotiations should begin," but stated bluntly that Britain would have to put its economic house in order.

On October 7, *The Economist* of London commented on the report: "The problem is that of Britain's limping economy .... The commission would be absorbing a Britain that has had an awful lot of balance of payments crises in the past few years; and which ... has not done anything sufficiently fundamental since 1964 to remove the probability that it is going to have more balance of payments crises in future, even if Britain aims for only a feeble annual growth rate of about 3 per cent between now and 1970 ...."

Whatever the outcome, successful completion of the Kennedy Round tariff negotiations on May 15 ensured that trade will increase at least temporarily among EEC, EFTA, and nonmember countries, and, it is hoped, prevent the threatened compartmentalization of the non-Communist world's commerce (see INTERNATIONAL TRADE).

Within the market, meanwhile, restrictions have been fast disappearing. Intra-community tariffs on industrial goods dropped 5% on July 1, 1967, to 15% of their level in 1957. According to a Council of Ministers decision of July 26, 1966, the final tariff reduction will be made on July 1, 1968, two years ahead of schedule. After that date there will be no tariffs on trade in industrial goods between member-states. At the same time the member-states will also abolish quotas on goods traded among them, and they will complete the aligning of the common external tariff and, it is hoped, the common agricultural market.

In its 10th and last annual report, published in July, the EEC Commission stressed that even after July 1968 a number of important problems will still remain to be solved before a genuine economic union will have been created.

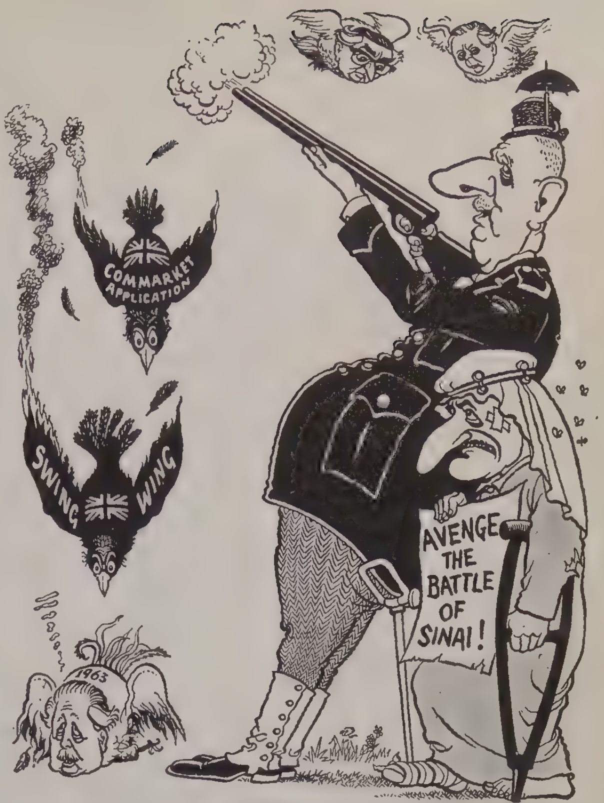
Coal and Steel Community. The coal and steel industries of the Six encountered increasing difficulties in 1967. The 15th annual report of the ECSC High Authority, released in April, observed that excess production capacity was the prevailing condition in both the coal and steel industries, though more so in the former. The report noted that such conditions were the direct contrary of what prevailed when the ECSC was created. Emergency provisions of the treaty were exercised with increasing frequency in order to cope with the strains.

In 1970 the ECSC coal industries are expected to mine 185 million tons, compared with 210 million in 1966. Social aid, including loans for industrial redevelopment to absorb surplus coal and steel workers, is one of the principal concerns of ECSC. There is a noteworthy shift here away from the pure philosophy of the market, on which EEC and ECSC were founded. The High Authority, its report states, still believes in healthy competition, but "there are limits; it is necessary to know these limits and to ensure, by suitable corrective steps, that the process of adjusting to circumstances does not degenerate into general disorder."

It is hoped that the merger of the three community executives will facilitate what was hardly possible before, the formation of a broad economic policy for all sectors of the economy, and will thus ease the difficulties that have plagued ECSC for a decade in regard to coal and for a year or two in regard to steel.

Atomic Energy Community. Euratom's research program passed several milestones in 1967. Under a contract with Britain's Atomic Energy Authority, irradiation experiments were carried on at Dounreay, Scotland, beginning in January and continuing throughout the year. In December 1966, the reaction rates of experimental fast breeder reactors in France and Germany became critical (that is, the first nuclear reactions began to take place), thus making possible research that simulated the behavior of large-scale fast breeders of the type expected to be in commercial use by 1980.

The Commission of Euratom submitted to the Council of Ministers a research program to cover the five years 1968–72; the existing 5-year program ended in 1967. The new lines of the research program take account of the development of new techniques of nuclear industry and the approaching commercial applicability of certain new power reactor designs. The proposals envisage the continuation of the present policy of Euratom participation in national projects that could benefit the entire community. Euratom assists in financing such projects and lends personnel and equipment.



CUMMINGS, IN THE DAILY EXPRESS, LONDON

"I understand you! I'm still avenging the Battle of Waterloo."

Council of Europe. The Council held three plenary meetings, its normal number, during the year. The third part of the 18th ordinary session of the Consultative Assembly met in Strasbourg from January 23 to 27. The five main themes of the meeting were the new British approach to the Common Market, the German problem, East-West relations, Europe's links with other continents, and the technology gap between the United States and western Europe. On January 23, on the first occasion

BRITAIN'S Harold Wilson (*right*) and West German Chancellor Kiesinger review troops in Bonn, where Wilson visited in February to discuss Britain's Common Market bid.

UPI

that a British premier had addressed the Assembly while he was in office, Prime Minister Wilson emphasized that Britain "meant business" in its renewed approach to the Market countries.

The first part of the Consultative Assembly's 19th ordinary session was held from April 24 to 28. A special delegation from the U. S. Congress visited the session to mark the 20th anniversary of the Marshall Plan. Members discussed, among other matters, the 5th report of the Organization for Economic Cooperation and Development (OECD) and witnessed the presentation of the Europe Prize for 1967 to the city of Strasbourg. Sir Geoffrey de Freitas of Britain was unanimously reelected president.

The second part of the 19th session was held from September 25 to 29. It was preceded, on September 21 and 22, by the 14th joint meeting with the European Parliament, the representative body of the three 6-nation communities.

Western European Union. WEU consists of the Six plus Britain and thus forms a useful link, if no more. Regular quarterly meetings of the WEU Council, to take stock of the political and economic situation, continued to be held in accordance with the agreement of July 1963. These meetings are private, but press conferences are held after them. The Assembly of WEU also met in June and December.

Free Trade Association. On Dec. 31, 1966, three years ahead of the original timetable, the seven member countries of the European Free Trade Association made the final reduction in their tariffs on manufactured goods originating in EFTA countries and being traded among them. EFTA thus established a single home market of 100 million people for manufactured goods. On the same date, Finland, EFTA's associate member, made a further 10% tariff reduction; her tariffs on goods imported from other EFTA countries then stood at only 10% of their 1960 level.

The EFTA Council met in Stockholm on March 2 and 3. The communiqué issued to members before the meeting stated that in view of the virtual abolition of internal tariffs attention would be concentrated on nontariff barriers to trade. The ministers met again in October in Lausanne.

The 7th annual report of EFTA, covering the period July 1966 to June 1967, was published in September. It noted that total exports of EFTA countries, at $15.6 billion, were 7.7% higher than in the preceding year. Imports, at $18.9 billion, were 6.2% higher and intra-EFTA trade in the first six months of 1967 was 14.4% higher than in the first six months of 1966.

The future of EFTA is, of course, in suspense, because three of its members have applied for EEC membership and the others seek some connection.

OECD. The Organization for Economic Cooperation and Development (OECD) has become chiefly a body for research and coordination. In 1967, OECD was considerably concerned with restrictions in the European money market, and held several conferences on this subject. The OECD survey of January correctly saw the 1967 economic outlook for Europe as less favorable than it had been in the preceding 18 months.

The OECD surveys of the economies of particular countries are noted for their impartial and often ruthless comments. Its survey of the United Kingdom economy (July) was skeptical of British ability to realize the growth target of 3% annually that the government had announced. Its Spanish survey (August) observed that the Spanish cost of living was rising at an "unacceptable" rate.

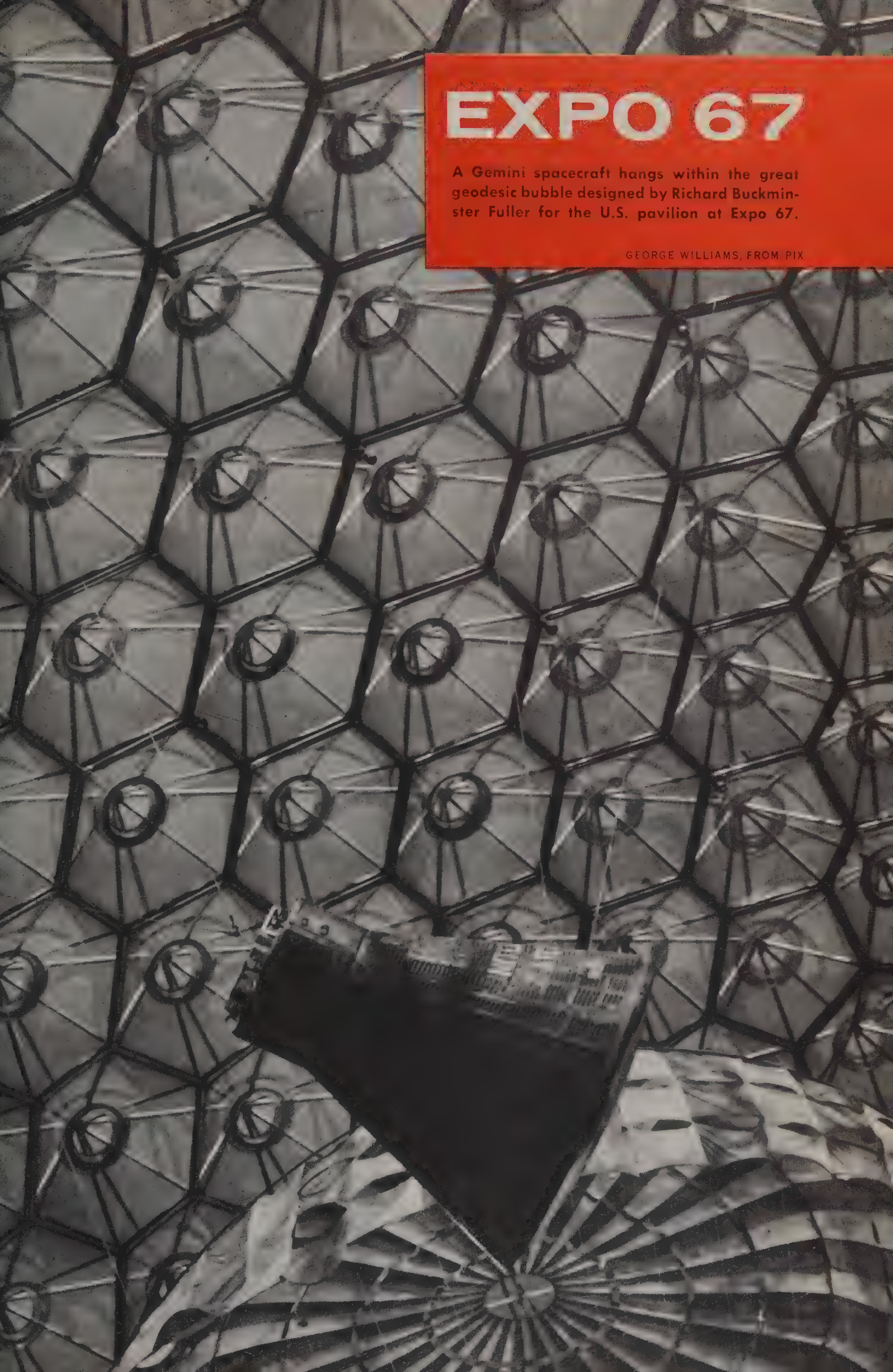
Arthur C. Turner
University of California, Riverside

EXCHANGE RATES. See International Finance.

EXPLORATION. See Geography and Exploration; Space Exploration.

IN ROME to mark the 10th anniversary of the European Common Market, May 29, are (*left to right*) Premier Pompidou and President de Gaulle of France, President Saragat of Italy, Premier Werner of Luxembourg, Chancellor Kiesinger of West Germany, Premier Vanden Boeynants of Belgium, and Premier P. J. S. de Jong of the Netherlands.

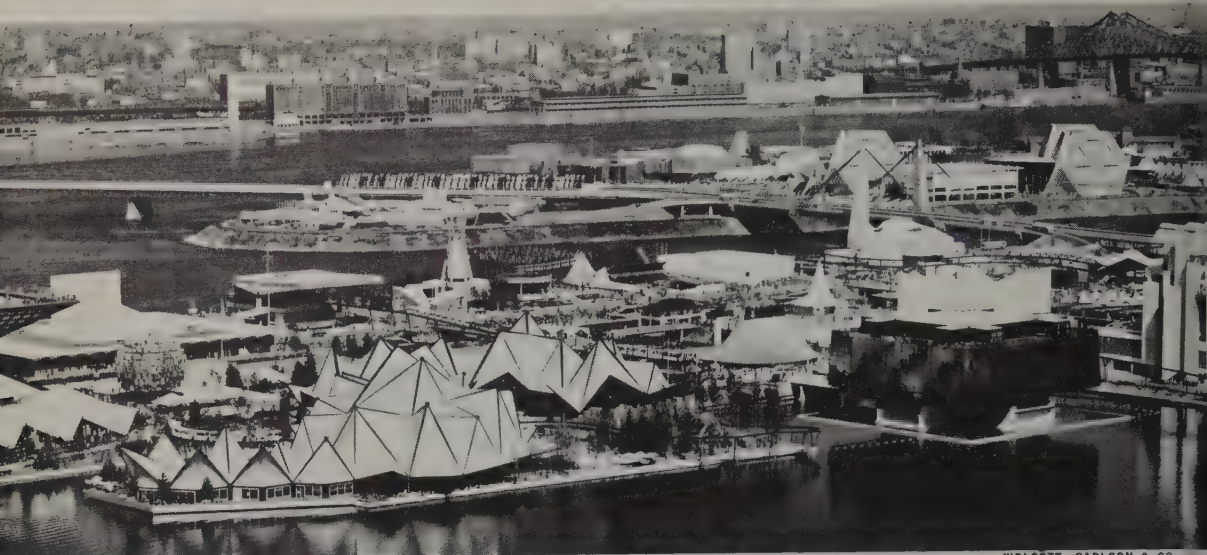
WIDE WORLD



EXPO 67

A Gemini spacecraft hangs within the great geodesic bubble designed by Richard Buckminster Fuller for the U.S. pavilion at Expo 67.

GEORGE WILLIAMS, FROM PIX



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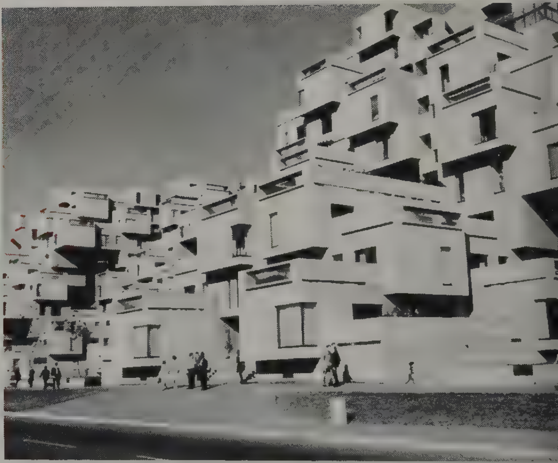
(*Above*) THE PAVILIONS of Expo 67 were built on two islands in the St. Lawrence River across from Montreal.

EXPO 67—CANADA'S GREAT CENTENNIAL EXPOSITION

Montreal's Expo 67 was the success of the year. Built partly on a bank of the St. Lawrence River, partly on islands created in the river, Expo 67 presented architectural innovations that delighted its more than 50 million visitors and favorably impressed professional observers and critics.



(*Right*) HABITAT 67, a complex of apartment houses, is composed of individual units lifted into place by cranes.

JOHN J. SMITH

EXPO 67

The largest international exposition ever held, and the crowning event of Canada's centennial year, Expo 67 attracted record crowds to Montreal from April 28 to Oct. 29, 1967. The Universal and International Exhibition of 1967, as it was officially named, had 116 pavilions, 76 restaurants, and more than 200 boutiques. It was built on a 1,000-acre site on Ile Ste.-Hélène and Ile Notre-Dame in the St. Lawrence River, and on Cité du Havre, a strip along the city's waterfront. Despite a month-long transit strike that paralyzed the city in the fall, Expo attracted more than 50 million visitors.

The purpose of Expo 67 was to present a picture of human progress in all areas of man's activity. The general theme—Man and His World—was inspired by the philosophy of the French aviator and author Antoine de Saint-Exupéry, as expounded in his book *Terre des Hommes.* The graphic symbol of the theme, designed by the Montreal artist Julien Hebert, was a circle of eight highly abstract, double figures with outstretched arms, representing mankind encircling the world in unity.

Expo 67, a "first category exposition" according to the classifications of the International Bureau of Exhibitions, was the first fair of this caliber ever staged in the Americas. It was financed jointly by the governments of Canada, Quebec, and Montreal and administered by the Canadian Corporation for the 1967 World Exhibition. Mayor Jean Drapeau of Montreal is credited with originating the idea, and responsibility for the general organization lay with Expo's commissioner general, Pierre Dupuy.

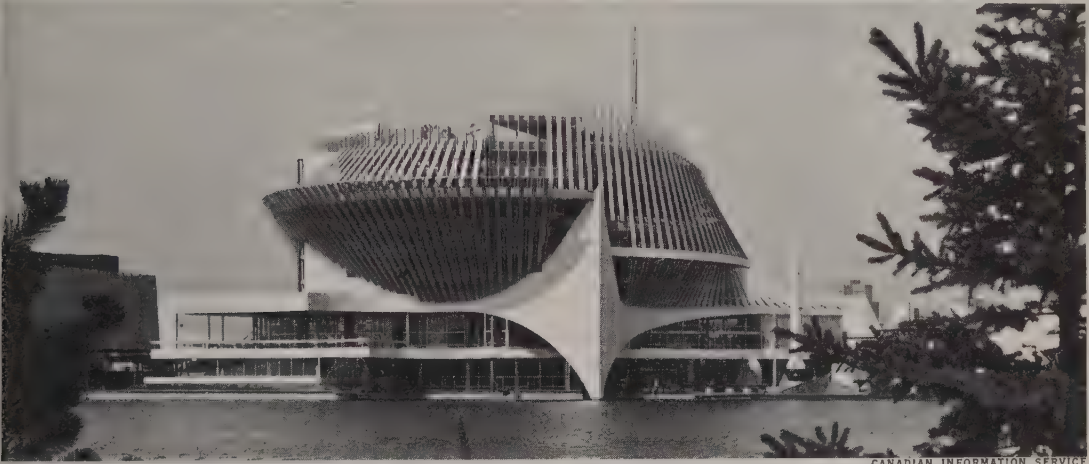
Ile Ste.-Hélène, formerly a mud flat in the St. Lawrence River, was enlarged, and Ile Notre-Dame was entirely created from earth and rock fill. Most of the 15 million tons of fill came from the excavations for Montreal's new subway, opened in 1966. To protect the two islands from being washed away by spring floods, an ice barrier 6,693 feet (2,040 meters) long was constructed upstream.

On these two islands and on the Cité du Havre waterfront area were constructed 16 pavilions related to the Man and His World theme, 62 national pavilions, 4 provincial pavilions, 34 pavilions of business and other organizations, and La Ronde, a giant amusement park.

CANADIAN INFORMATION SERVICE

(*Below*) **THE FRENCH PAVILION** contained seven stories and a roof terrace, enclosed by sloping blades of aluminum.

(*Above*) **CANADA'S PAVILION** was topped by an inverted pyramid, the "Katimavik" (Eskimo for "gathering place").



CANADIAN INFORMATION SERVICE

ATTENDANCE

Attendance at Expo 67 broke all records for similar international fairs. It was toured by many dignitaries, notably Queen Elizabeth and the Duke of Edinburgh, who visited Expo 67 on July 3. In the 6-month period to which it was limited by the rules of the International Bureau of Exhibitions, 50,306,648 persons visited Expo 67. This figure might have been substantially higher had it not been for a strike of Montreal's bus and subway drivers that lasted from Sept. 21 until Oct. 14.

Accommodations. The great influx of visitors to Montreal created stupendous accommodation problems. The Canadian Corporation established Logexpo to provide a free registration service to bring together persons looking for rooms and those with rooms to let. The provincial government established the Quebec Lodging Service to supervise accommodation rates.

Transportation. Visitors to Expo 67 came from all over the world, but especially from Canada and the United States. At the site of the fair, a superb system of internal transportation, especially the free Expo-Express, carried people from one section to another swiftly and efficiently. Elevated "minirail" trains gave passengers a panoramic view of the fair, with stops at major pavilions. Information about the length of waiting lines at the various pavilions was flashed from 24 computerized boards around the grounds.

THE THEME PAVILIONS

The 16 theme pavilions at Expo 67 illustrated five different aspects of the general theme, Man and His World. The five sub-themes were Man the Creator, Man in the Community, Man the Explorer, Man the Producer, and Man the Provider. All of the theme pavilions expressed a feeling of optimism and confidence in man's ability to use the resources of nature wisely. Because they were built by the mutual cooperation of many of the countries participating in Expo 67, the theme pavilions had an international feeling that reflected the fair's purpose.

Man the Creator. A collection of 200 works of art from galleries in 30 countries was shown in the Museum of Fine Arts, focal point of the complex representing Man the Creator. An outdoor display of

MARC & EVELYN BERNHEIM FOR RAPHO-GUILLUMETTE

UPI

(*Above*) THE SOVIET PAVILION showed space exploration items and a huge relief of Lenin in its Cosmos Hall.

(*Left*) CZECHOSLOVAKIAN PAVILION featured a multi-slide mosaic show in addition to its popular film shows.

modern sculpture, a superb selection of 500 photographs, and an exhibit of contemporary industrial design also were shown.

Man in the Community. Habitat 67, an extraordinary, multilevel apartment complex, was the outstanding feature of the Man in the Community complex. Designed by Moshe Safdie, it will remain as a permanent part of Montreal.

The main pavilion of the Man in the Community complex was a pagodalike structure housing an exhibit of the major social problems of modern man. Other popular sections of this complex were Labyrinth, a revolutionary film display prepared by the National Film Board of Canada, and the Man and His Health pavilion displaying recent advances in all branches of medicine.

Man the Explorer. A group of four pavilions illustrated the sub-theme Man the Explorer. They represented the exploration of the seas and oceans, the polar regions, space, and of life itself. At nearby Dupont Auditorium scientific films were shown daily under the title *Insight 67*.

The Man and the Oceans pavilion featured an underwater house, designed by the famous oceanographer Yves Cousteau. Also shown was a large, animated model of the Zuider Zee land reclamation project.

Audiovisual displays simulated polar experiences for visitors to the Man and the Polar Regions pavilion. In Man, His Planet, and Space, films and exhibits emphasized man's attempts to adjust to various environments. Visitors were led through a series of underground exhibits depicting the genesis of the earth and the structure of its subterranean regions. Another section portrayed the effect of space exploration on human behavior.

The final pavilion of the Man the Explorer complex represented man's exploration of life itself. An enormous reconstruction of a human cell was the most impressive exhibit. Other displays demonstrated the growth of a neuron, the functioning of the brain, and the progressive improvement in systems of communication from lower to higher animals.

Man the Producer. Visitors to this pavilion saw demonstrations of various sources of energy, from coal to nuclear power. The marvels of the computer age were demonstrated in an exhibit where television sets were being assembled entirely by programmed machines. One popular display was set up as a game where visitors matched wits with a computer.

Man the Provider. The largest and the most idyllic of the theme areas was Man the Provider, which told the story of agriculture. Crops were actually grown in a central area called Sun Acre. Different phases of farming were demonstrated in the nine buildings surrounding Sun Acre.

THE NATIONAL PAVILIONS

A major attraction of Expo 67 was the individual pavilions of the nations. Each of the 62 nations participating in the fair had its own building, expressive of its own national genius.

Canada. The largest of the national exhibitions was the 11-acre Canadian pavilion, a cluster of pyramids around a massive inverted pyramid. Called Katimavik, the Eskimo word for "meeting place," the pavilion's displays included the striking Tree of the People, a 6-story-high construction of life-sized photographs of Canadians of all types and all occupations. The photographs were tinted to suggest the fall color of a maple leaf, the symbol of Canada.

United States. The awe-inspiring 20-story-high geodesic sky-bubble that composed the United States pavilion was designed by R. Buckminster Fuller. The most impressive section of its interior was the reconstruction of a projected Apollo space trip to the moon in 1970, complete with lunar landscape.

USSR. The Soviet pavilion, one of the largest and most impressive at Expo 67, was strikingly modern with a curved roof and glass sides. The exhibits stressed the Soviet Union's achievements in technology and in economic progress. A popular feature was the simulated space ride, in which visitors experienced sensations of space travel.

Britain. The British pavilion was a dominant landmark of the fair with its jagged tower, 200 feet (61 meters) tall, surmounted by a three-dimensional Union Jack. The tower suggested an incomplete state of construction; it was designed to symbolize Britain's continuing contribution to the world. The pavilion's exhibits demonstrated Britain's achievements in the arts, literature, music, science, industry, government, and world affairs.

Czechoslovakia. Of the small pavilions at Expo 67, the most outstanding was the Czechoslovakian. An immensely popular feature was its unique audience-participation film, *Kino-automat*. Also on display were fine Bohemian glassware and lace.

Other National Pavilions. The smaller national pavilions attracted visitors by their architectural innovations and by special exhibits designed to reflect native specialties. The German pavilion, one of the most original architecturally, was covered with 110,000 square feet (10,219 sq meters) of transparent plastic stretched over poles to form a circus tent form. Many countries, including Ceylon and Iran, used modern variations on their traditional architectural styles for their pavilions.

Among the most striking modern structures were the pavilions of Mexico and Venezuela. Food and art were emphasized at the French pavilion, which had several of the most exciting restaurants at Expo 67, as well as a miniature museum tracing the history of French art. Treasures of national art also were exhibited at the Belgian, Ethiopian, Swiss, and Italian pavilions. The pavilion of Nationalist China was badly burned in May but was quickly rebuilt.

LA RONDE

In lively contrast to the serious note struck in many of the pavilions, La Ronde, Expo 67's amusement area, was the fun center of the exhibition. Its 135 acres (55 hectares) were devoted solely to the entertainment of its millions of visitors.

At Fort Edmonton—Pioneerland, visitors saw a traditional Western setting that carried them back to the days of the Gold Rush. Attractions at Children's World were Mother Goose tales brought to life and a miniature roller coaster that climbed and dipped on the sides of Pumpkin Hill. And at Dancing Waters, visitors watched the spectacular effects of 1,000 changing water patterns synchronized with a fireworks display.

WORLD FESTIVAL

An integral part of Expo 67, the World Festival brought to Montreal the greatest program of cultural entertainment ever presented in one place during a 6-month period. Almost 2,000 various attractions, involving about 25,000 participants, were presented. Among the notable attractions were the La Scala Opera of Milan, the Vienna State Opera, the New York City Ballet, the Royal Ballet, the National Theatre of Great Britain, the Stratford Festival of Canada, the New York Philharmonic Orchestra, and the Vienna Philharmonic Orchestra. Most of the performances were held at the Place des Arts in downtown Montreal.

For sports enthusiasts, there were several outstanding events, including an international soccer tournament in Expo 67's 25,000-seat stadium.

Allan M. Fraser
Provincial Archivist of Newfoundland

EYE DISEASES

Several major advances were made in the field of eye diseases in 1966 and 1967. Two such gains are the screening of preschool children to determine the presence of correctable eye defects, and the rehabilitation of persons classified as partially sighted or industrially blind. In addition, there have been investigations into the causes of reading difficulties in children and the incidence of eye disorders in infants whose mothers contracted rubella (German measles) during pregnancy. Also, requirements in visual acuity have been established for persons operating private automobiles.

Preschool Screening. The two disorders most easily diagnosed through preschool screening are amblyopia ex anopsia and ocular nystagmus. In amblyopia ex anopsia, the vision in one eye is impaired due to disuse. If the child wears special glasses or a patch over the better eye, the poorer eye can be stimulated to develop. In ocular nystagmus, there are rapid, involuntary movements of the eyeball, and the associated visual impairment is in proportion to the extent of the jerky movements. Cross-eye, walleye, and other similar conditions (known collectively as strabismus) often accompany this condition. In the past few years it has been noted that correction of the strabismus, with glasses that correct the refractive error, has improved vision.

Rehabilitation. Persons whose corrected visual acuity ranges between 20/70 and 20/200 in the better eye are said to be partially sighted. A person with less than 20/200 in the better eye is considered industrially blind. In the past two years, progress has been made in reading aids for both groups. It has also been found that the rehabilitation of these people depends largely on the way they react to their blindness, especially the efforts they make to deal realistically with their disability.

Reading Difficulties. Children with reading difficulties have been found to fall into three groups: (1) those of average or above average intelligence, with a specific reading disability, probably due to a physiological disturbance in the cerebral hemispheres of the brain; (2) the slow readers, whose disability is related to low intelligence, faulty vision or hearing, emotional disturbances, or a combination of these factors; and (3) the mixed type, whose disability is due to a combination of factors in both the first and second categories.

Eye Disorders and Rubella. A high incidence of retinal disorders has been found in infants born with congenital rubella. Such changes in the retina may result from cataracts, glaucoma, or other eye abnormalities caused by rubella. In addition, the frequency of microphthalmos (very small eyes) contributes to blindness in rubella infants.

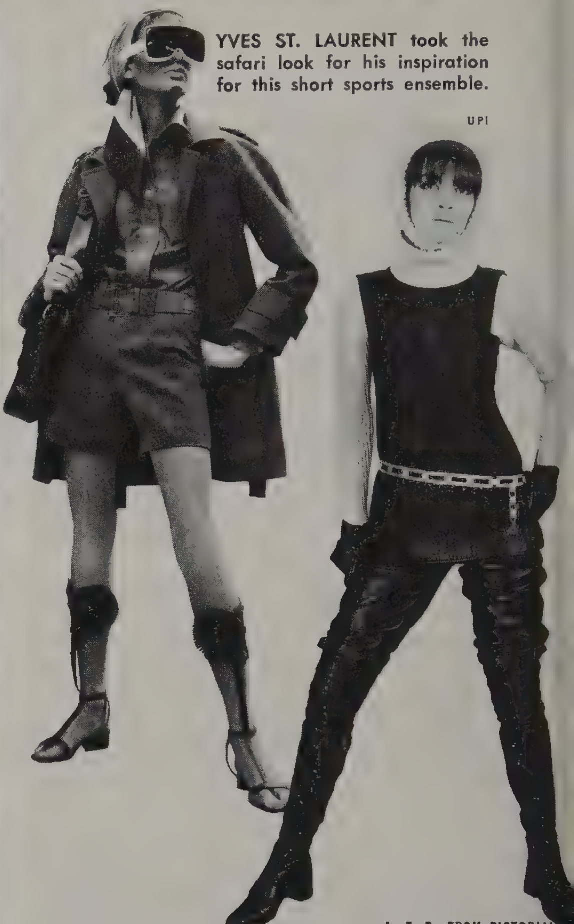
Drivers' Licenses. In all states of the United States, licensing authorities have established visual acuity requirements for drivers of private automobiles. At present, people whose corrected vision is 20/40 or better may be advised that their vision is adequate for operating a private vehicle. Those with less than 20/70 corrected vision in the better eye should not be permitted to drive, and those whose corrected vision ranges between 20/40 and 20/70 should be judged on an individual basis.

Roland I. Pritkin, M. D.
Eye Surgeon and Consulting Ophthalmologist
M. L. Duchon, M. D.
Ophthalmologist

FASHION

WIDE WORLD

TWIGGY, British model and fashion rage of 1967, arrives in New York in March with her manager, Justin de Villeneuve.



YVES ST. LAURENT took the safari look for his inspiration for this short sports ensemble.

UPI

A. F. P. FROM PICTORIAL

BOOTS reached new heights in all the important 1967 collections. This casual costume is from Yves St. Laurent.

FASHION

Fashion began and ended on a note of femininity in 1967. Clothes were more figure conscious, more individual, and in almost all respects very colorful and inventive.

Silhouette. The belted look made a comeback in the spring collections and remained important throughout the year. Even unbelted silhouettes—skimmers, tents, and drifting shapes—showed more control. There were many halfbelts in back, worn high or loosely at normal height, as well as three-quarter belts that attached to buttons at double breasted fronts. For spring and summer, daytime dresses were short, uncluttered, and colorful. In the autumn collections belts made the biggest silhouette news especially some that were very wide, wrapping the midriff from bust to waist.

Suits featured long jackets over short skirts, or short jackets cropped at the waistline. Most suits had coordinated blouses. Generally skirts were easy even when slim; many had dirndl fullness.

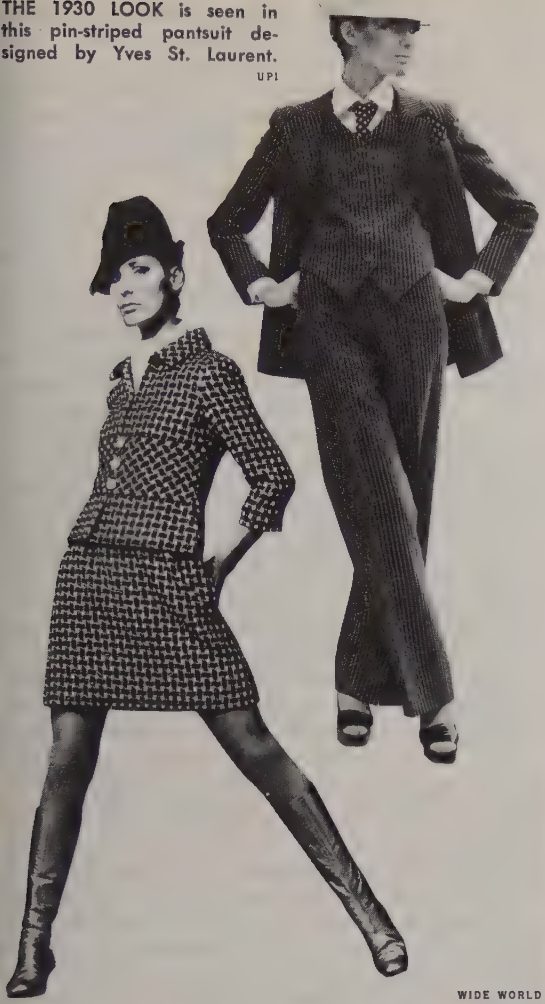
The short-sleeved coat made a surprising comeback, and some sleeveless coats were shown over long-sleeved dresses. Most coats were loosely belted.

By fall, the soft, romantic look was in full swing. Soft shirt dresses in billowy chiffon or in satin had demure, high necklines and French cuffs. Skirts puffed out with restrained fullness and often went all out for fullness in fabrics like velvet (iridescent or panne), matelassés, and brocades. The influence of the motion picture *Dr. Zhivago* was seen in high fur collars, fur cuffs, and side fastenings. Nailheads, commercial zippers, metal inserts, outsize metal sequins, buckles, and metal clasps were used as decorations.

Skirt lengths were short in all garments except "Dr. Zhivago" coats. Mature women adhered to knee length, while youngsters favored miniskirts that rose to three inches or more above the knee.

Fall coats were neat, slim, and generally single-buttoned. The newest looking coat featured a fitted waistline and a bowled-out skirt. Capes were popular for day and evening.

Colors. The colors of 1967 were the reddest reds, the yellowest yellows, the greenest greens, violet, and the entire family of mauves. Brown was rediscovered as a basic color for clothes and accessories. Throughout the year colors were used in bold, contrasting combinations. Fall fashions were ablaze



THE 1930 LOOK is seen in this pin-striped pantsuit designed by Yves St. Laurent.

UPI

WIDE WORLD

THE CLASSIC SUIT was updated with new details and worn short with boots, as in this design by Lito Manalang.

with brilliant color, and even blacks sparkled with nailheads, sequins, and jewels.

Fabrics. Popular fabrics of the year were textured wools, tweeds, lacy woven wools, plaids, checks, patterned worsteds, and textured cottons. There were several new wrinkleless synthetics on the market. Lace made an important comeback in dresses and trimmings, and four-ply crepe, chiffon, surrah, silk twill, and silk linen enhanced the overall feminine feeling of fashion. The whole gamut of silks and new patterned cottons became popular.

Fall fabrics were unusually varied—spider web laces, lush velvets, matelassés, shimmering metallics, great plaids, and tartans. Traditional and romantic fabrics such as velvet and taffeta were used for both day and evening wear. Evening fabrics were elaborate, romantic, and brilliant in color. Patterned sequins, jeweled flannels, yards of chiffon, lace, and richly embroidered fabrics completed the picture.

Sportswear. Pants were designed to wear everywhere. There were pants for city, country, dances, at-home dinners, and travel. Slim long pants with pea coats were popular, as were short pants or culottes designed with the grace of a skirt. Culottes often had matching tops to give them the look of a suit for city appearance. Evening pants were exotic and full, sometimes resembling twin skirts.

It was a big year for shirts—the classic button-down shirt, the four-pocketed safari shirt, and the ruffled, lace-trimmed Edwardian shirt. They were worn with short skirts, evening skirts, and pants.

Sweaters were longer, leaner, and often belted. Many had shirtlike collars or high turtlenecks.

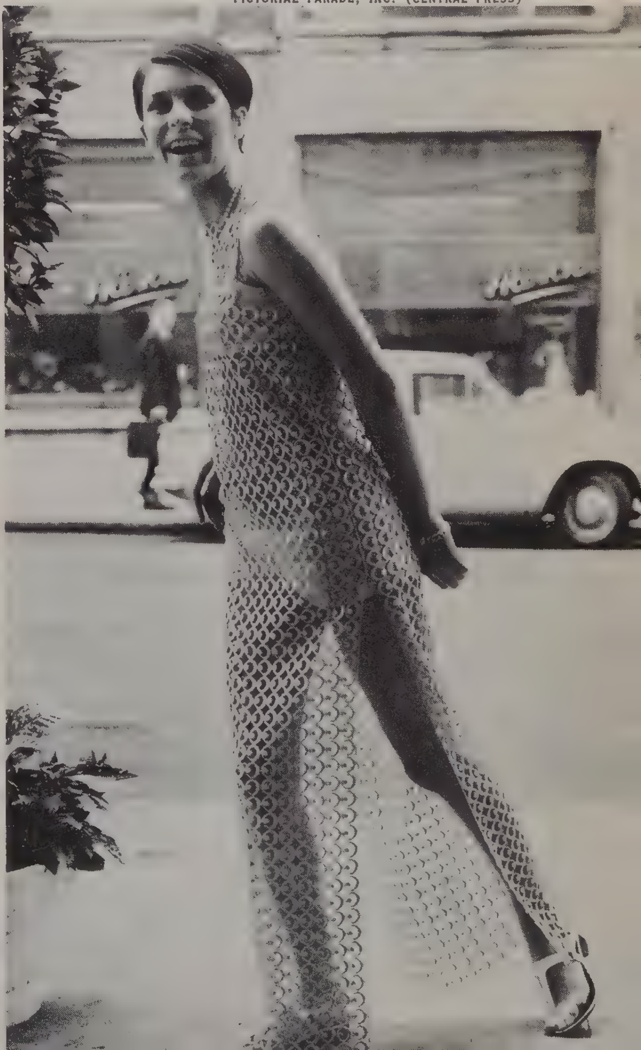
Accessories. Short skirts made shoes and stockings an important part of the fashion picture in 1967. The most important shoe was still the pump with a low, thick heel, sometimes in clear lucite. Boots ranged in height from the ankle-length shoe boot to a thigh-high elasticized boot fitted like hose. Jumpers, kilts, short puffy skirts, and dresses were worn with short matching pants or bloomers and usually with knee socks.

Opaque hosiery in neon-bright summer and fall shades was popular. Knee socks were worn with short pants, culottes, and knickers. Evening hose were made of gold, silver, or bronze metallic threads.

Jewelry was highlighted by long earrings for evening and big, colorful earrings for daytime. Bracelets had gigantic colored stones. Necklaces made a small comeback, especially three-strand pearls.

CHRISTIAN DIOR OF LONDON created this resort ensemble with its chain-mail tunic and bikini bathing suit.

PICTORIAL PARADE, INC. (CENTRAL PRESS)



WIDE WORLD

LACE and other rich fabrics were used to create a romantic and opulent look in evening fashions for 1967. Here, black lace is contrasted with white lace and white accessories.

Bright "Mod" wristwatches with enormous faces and wide bands were sold in every price range.

Metal chains decorated shoes, wrapped waists, and detailed handbags. Tiny purses in leather with chain handles and small evening bags in a variety of fabrics and furs were also popular.

Men's Wear. A revolution took place in men's fashion during 1967. Color was more brilliant and unrestrained than it had been for years. Silhouette was carefully shaped, and coordinates guaranteed a total look. Sports coats and blazers came with their own trousers or vests; outer jackets and sports shirts were coupled with compatible slacks; and sweater sets abounded.

Double-breasted styles were worn for both town and country. Plaids were used in suits and sports jackets, and tattersall was introduced in all varieties of casual wear. Cavalry twill, whipcord, citified tweeds, and aggressive plaids were prominent.

Turtleneck sweaters appeared under jackets, even for formal evening wear. Shirts featuring spread collars and French cuffs followed the color trend in bright solids or boldly contrasting stripes.

Shoes were designed in softer leathers and often had squared toes. Handsewn slip-ons were popular, as were shoes detailed with saddle stitching, saddle chains, buckles, and lacings.

Ties emphasized prints, woven stripes, and textured solids, often with a traditional feeling imported from Britain.

Children's Wear. The year 1967 was one of the most colorful in the history of children's wear. Bold, bright, and sophisticated shades replaced the traditional candy-colored pastels. Ruffles, bows, and fussy details gave way to impeccably tailored clothes that were spirited and modern.

Spring and summer playclothes came in wild and dazzling stripes. Even boys' clothes for every age category were bright and imaginative. Fall fashions had an international feeling. The free spirit of Paris and the whimsy of the London "Mod" styles were combined by American designers.

Tartans were important for schoolwear in everything from pullovers and knickers to knee socks. For girls, there were kilts and pantdresses. Cold weather clothes were often buckled and zippered in shiny hardware.

ANNE FOGARTY
Fashion Designer; Author of "Wife-Dressing"

FEDERAL BUREAU OF INVESTIGATION

Fines, savings, and recoveries resulting from Federal Bureau of Investigation (FBI) work in the 1967 fiscal year rose to more than $278 million. This amounted to a return of $1.53 for every dollar appropriated for FBI operations.

More than 15,000 fugitives sought in FBI investigations were located during the 1967 fiscal year. This was an increase of 11% over the preceding year. Among those apprehended were over 3,200 criminals sought under the Fugitive Felon Act and 14 felons on the FBI's "Ten Most Wanted Fugitives" list. Crimes against banking institutions continued to rise with 2,259 bank robberies, burglaries, and larcenies reported to the FBI.

During the fiscal year 1967, an all-time high of 121 persons were convicted and over 300 were awaiting trial for violating interstate gambling laws under FBI jurisdiction. A substantial rise in the number of thefts of government property was noted. In one case, the FBI recovered property worth nearly $573,000 that had been stolen from a military supply depot.

In the field of internal security, retired Army Lt. Col. William H. Whalen and Air Force Sgt. Herbert Boeckenhaupt, in separate cases investigated by the FBI, were sentenced to prison for conspiracy to commit espionage for the Soviet Union. In both instances, Soviet personnel involved left the United States.

The FBI continued its surveillance of the Communist party, USA, which held its first national convention since 1959 in June 1966. The party undertook extensive reorganizational plans in the fiscal year 1967. FBI reports indicated that Communist party activities are being directed toward youth, labor, the press, civil rights, and the influencing of foreign policy.

Two sessions of the FBI National Academy were held during fiscal 1967, bringing the total number of graduates to 5,136. FBI personnel participated in over 6,000 departmental and regional-type police training schools during the year.

In the same period, the FBI Identification Division received a total of 6,974,179 sets of fingerprints. The files now contain over 184 million sets of fingerprints representing more than 80 million persons. During the 1967 fiscal period, the FBI Laboratory received 223,996 specimens of evidence, requiring over 330,000 scientific examinations.

The FBI is the investigative arm of the U. S. Department of Justice. Established in 1908, it is charged with the investigation of violations of certain specific federal laws and the collection of evidence in such instances. It has jurisdiction over 175 investigative matters in the criminal and internal security fields.

J. EDGAR HOOVER
Director, Federal Bureau of Investigation

FEDERAL POWER COMMISSION

Of major concern to the Federal Power Commission (FPC) during 1967 was the question of how to prevent recurrences of electrical system outages, or power failures.

Reports. On July 26 the FPC sent a report on "Prevention of Power Failures" to President Johnson. The report recommended strengthened interconnections and expanded coordination of electric utility systems in the United States to prevent major cascading outages. The report also outlined a pattern of extra-high-voltage transmission lines that will be needed by 1975. The commission found that the electric power industry has adequate technical competence, equipment, and operating knowledge to provide reliable power.

To implement the recommendations of the report, the proposed Electric Power Reliability Act had been sent to Congress by the FPC on June 8. The act would give the FPC authority to facilitate the provision of reliable, abundant, and economical electric power in the United States.

Major Failure. On June 5, just three days before the Electric Power Reliability Act went to Congress, the 20th major outage since the great Northeast power failure of 1965 hit the United States. Nearly 13 million persons in eastern Pennsylvania, most of New Jersey, and parts of Delaware and Maryland were without electricity for as long as 10 hours.

Electricity. The electric power industry generated a record 1.14 trillion kilowatt-hours in 1966, an increase of 8.4% over 1965. Installed generating capacity at the end of 1966 totaled over 247 million kw, an increase of 11 million kw over the record set the previous year. Nuclear-powered generating stations accounted for over 1.5 million kw by the end of 1966, up from 925,000 kw a year earlier.

In 1966 the commission licensed the construction of two new hydroelectric power projects having a combined capacity of 1.27 million kw.

Natural Gas. The FPC authorized a record $1.4 billion of additional natural gas pipeline construction in the fiscal year ending June 30, 1967. Included were authorizations for 8,371 miles (13,469 km) of pipeline and 666,200 horsepower of compressor capacity. Major pipeline companies sold 10.4 trillion cubic feet of gas in 1966. The average price paid by the pipeline companies to producers of gas was 16.86 cents per thousand cubic feet in 1966, 0.15 cents higher than 1965. The average price of gas sold by pipeline companies under the commission's rate schedules to distribution utilities was 36.18 cents per thousand cubic feet in 1966, down from 36.59 cents in 1965.

In 1967 the commission endorsed legislation that would give the Department of Transportation jurisdiction over safety precautions in gas pipelines.

Rates. In 1966 interstate natural gas pipeline companies filed with the commission wholesale rate reductions totaling nearly $20 million annually and rate increases of about $650,000 per year. Electric utilities filed $6,665,595 in annual wholesale rate reductions and $9,070 in increases during the year.

Membership. The Federal Power Commission on Sept. 1, 1967, was composed of Lee C. White, chairman; John A. Carver, Jr., vice chairman; Lawrence J. O'Connor, Jr.; Charles R. Ross; and Carl E. Bagge.

LEE C. WHITE
Chairman, Federal Power Commission

FEDERAL TRADE COMMISSION

In protecting consumers and reputable businesses from deceptive practices, principally false advertising, the Federal Trade Commission (FTC) in 1967 gave priority to those areas in which consumers least able to afford losses were being victimized. These included spurious part-time job opportunities, exaggerated claims for health remedies and correspondence schools, and high-pressure selling practices for home improvement products.

The FTC is an independent regulatory agency of the U.S. government with responsibility for safeguarding business and the public from unfair methods of competition and from deception in advertising and selling. The commission makes a particular effort to halt illegal activities at their start, especially in the field of trade restraints. These include corporate mergers, price manipulation, illegal advertising allowance arrangements between buyers and sellers, illegal brokerage payments, and prohibited resale price maintenance.

The actions and decisions of the FTC are subject to review by the courts. For example, in April 1967 the U.S. Supreme Court upheld the FTC's order requiring Procter & Gamble to divest itself of its illegal acquistion of Clorox, Inc. This decision clarified the FTC's authority to proceed against conglomerate mergers that endanger competition.

In recent years the FTC has been making a strong effort to employ enlightenment and persuasion to gain compliance with the law as an alternative, whenever possible, to mandatory proceedings. Means to this end are trade regulation rules, advisory opinions, industry guides, and trade practice conferences. The commission also is more frequently concluding proceedings by accepting from respondents assurance that illegal acts will be discontinued and not resumed. This procedure has proven effective and is far less costly than formal litigation.

Efforts went forward during 1967 to develop closer cooperation between the FTC and agencies of state governments to correct unfair methods of competition and deception which occur at state levels. Such liaison has the dual effect of informing the FTC about trade abuses which may warrant its attention and encouraging state officials to move against such practices when they occur in intrastate commerce, which is outside of the FTC's jurisdiction.

Economic reports by the FTC included a study of product standards in the marketing of softwood lumber, an analysis of tire pricing and advertising, a study of bread and milk marketing, and a continuing study of the trend toward corporate mergers and economic concentration.

With headquarters in Washington, D.C., the FTC maintains 11 field offices in the United States.

The FTC is directed by five commissioners: Paul Rand Dixon (chairman), Philip Elman, Everette MacIntyre, John R. Reilly, Jr., and Mary Gardiner Jones. Commissioners are appointed to staggered seven-year terms by the President, and no more than three may be of the same political party. The President names the chairman.

PAUL RAND DIXON
Chairman, Federal Trade Commission

FENCING. See SPORTS.

FINANCE. See BANKING; BUDGET, U. S.; ECONOMIC REVIEW; FOREIGN INVESTMENTS; INCOME; INTERNATIONAL FINANCE.

FINLAND

"No one can be unaware that a presidential election is coming," Premier Rafael Paasio noted early in 1967. "Although it is nearly a year away, excitement has been rampant for a long time."

When the two-step elections were held early in 1968 (election of the 300-member electoral college by popular vote on January 15, and election of the president by that body on February 15), President Urho K. Kekkonen won his third 6-year term.

Election. President Kekkonen's prospects for an unopposed third term looked good at first. Then the Conservative and the Farmers' parties nominated Matti Virkkunen and Veikko Vennamo, respectively, and a Helsinki newspaper rejoiced that "now we can speak of a real presidential race." Yet victory for Kekkonen seemed certain. He was endorsed by the three major parties, as well as by several minor groups. By praising the Communists (currently represented in the ruling coalition) for bringing "new spirit and vitality" to the political scene, Kekkonen made his left flank even more secure.

Foreign Relations. A poll in September showed that 85% of the Finns heartily approved the handling of foreign affairs. Foreign Minister Ahti Karjalainen reported "no serious unresolved questions" but called for acceptance of Kekkonen's often-proposed Nordic nuclear-free zone. At the United Nations, Finnish spokesmen urged de-escalation of military operations in Vietnam and cessation of bombing of North Vietnam, as well as Israeli withdrawal from occupied territories and Arab recognition of Israel.

Minor irritations ruffled relations with the Soviet Union. The Finnish government called attention to a gross error, later acknowledged, in a Moscow television documentary on the Winter War (the Soviet-Finnish war of 1939–40). The Soviet armed forces' news organ, *Krasnaya Zvezda* (*Red Star*), charged Finnish right-wing circles with fomenting ill feeling in connection with the celebration of the 100th anniversary (June 4, 1967) of the birth of the Finnish military leader and statesman Carl Gustaf Emil Mannerheim (1867–1951). Another Soviet paper, *Izvestia*, was alarmed over visits to Finland of West Germans, including Willy Brandt, who were suspected of pro–European Economic Community and anti–East German machinations. Recognition of the two German regimes, with which Finland has only commercial ties, was vigorously, if inconclusively, debated.

Economy. Only modest economic gains were made in 1967. The gross national product rose 3%, and industrial production about 4%. Factors in the slowdown were a shortened workweek, a rise in unemployment, strikes, higher taxes, curbs on installment buying, and reduced foreign demand (the economy depends heavily on exports). Various steps were taken to spur activity, including a 10-year housing program, with an annual goal of 50,000 units, and more attractive opportunities for direct foreign investment (mining and forest industries excluded). Finnair, Finland's major airline, received a $21 million loan from the Export-Import Bank for purchase of DC-8 jets. The government easily floated a $15 million bond issue in the United States, the fifth offer since 1960.

Exports rose 6% and imports, only slightly. Although a modest reduction in the trade deficit occurred, a serious and chronic balance of payments deficit compelled the government to devalue the currency by 31.25% on October 11. Measures were taken to cushion domestic and international repercussions.

One half of Finland's exports fell within Kennedy Round tariff reductions. Integration of European economies was a matter of grave concern. In late August, President Kekkonen expressed the view, not shared by the Communists, that Finland's neutrality would not hinder cooperation with the European Economic Community if mutually satisfactory arrangements could be devised.

(See also EUROPE; INTERNATIONAL TRADE.)

Finland's aid to developing nations rose from 3.8 million marks (markkaa) in 1962 to 13.2 million 1967; 74% of this aid was extended through UN channels.

Jubilee Year. Finns celebrated the 50th anniversary (Dec. 6, 1967) of their country's independence with appropriate ceremonies.

JOHN I. KOLEHMAINEN
Heidelberg College, Ohio

FINLAND • Information Highlights

EUROPE
ASIA

Area: 117,946 square miles (305,480 sq km).
Population: 4,651,000 (Jan. 1, 1967, est.).
Chief Cities (1965 est.): Helsinki, the capital, 505,908; Tampere, 144,158; Turku, 140,385; Lahti, 81,604.
Government: *President*—Urho K. Kekkonen (took office March 1, 1962, for 2d 6-year term); *Premier*—Rafael Paasio (took office May 27, 1966). *Parliament*—200 members (party seating, 1967: Social Democratic party, 55; Center party, 50; People's Democratic League, 42; Conservative party, 26; Swedish People's party, 12; Liberal party, 8; Social Democratic League, 6; Farmers' party, 1).
Religious Faiths: Evangelical Lutheran, 92% of population.
Education: *Literacy rate* (1961), 99.8% of population. *Total school enrollment* (1965–66)—959,460 (primary, 544,047; secondary, 268,014; teacher-training, 1,990; people's high schools and evening schools, 107,001; university, 38,408).
Finance (1966 est.): *Revenues*, $2,175,885,312; *expenditures*, $2,175,831,562; *public debt* (1965), $1,076,875,000; *monetary unit*, markka (4.2 markkaa equal U. S.$1).
Gross National Product (1966): $8,662,500,000.
National Income (1966): $6,846,875,000; average annual income per person, $1,476.
Economic Indexes (1966): *Industrial production*, 177 (1958=100); *agricultural production* (1965), 131 (1956–57=100); *cost of living*, 140 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,560,000; newsprint, 1,294,800; gasoline (1965), 629,000; crude steel, 384,000; lumber (1965), 6,807,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Potatoes, 1,066,000; oats, 883,000; barley, 597,000; sugar beets, 404,000.
Minerals (metric tons, 1965): Limstone and dolomite (1964), 3,500,000; iron ore, 429,000; sulfur pyrite, 282,000.
Foreign Trade (1966): *Exports*, $1,505,000,000 (chief exports, 1965: lumber, $192,946,875; wood pulp, $123,887,500); *imports*, $1,726,000,000 (chief imports, 1965: automobiles, $102,359,375; agricultural machinery $46,140,625; distillate fuels, $42,993,750; coffee, $41,025,000). *Chief trading partner* (1965): Britain (took 21% of exports, supplied 15% of imports).
Transportation: *Roads* (1966), 42,038 miles (67,654 km); *motor vehicles* (1965), 542,365 (automobiles, 454,291); *railways* (1965), 3,570 miles (5,745 km); *merchant vessels* (1966), 225 (957,000 gross registered tons).
Communications: *Telephones* (1966): 835,682; *TV sets* (1965), 732,000; *radios* (1965), 1,541,000; *newspapers* (1964), 68.

UPI

BRUSH FIRE rages through Chatsworth, Calif., just north of Los Angeles, in October. More than 24 houses were destroyed by fire in this hard-hit area of the state.

FIRES

Fires in the United States in 1967 caused 12,200 deaths and $2.07 billion in losses, up $270 million from 1966, according to a preliminary estimate from the National Fire Protection Association (NFPA).

Although reported fire losses have continued to increase steadily, these losses in relation to simultaneous population growth and rising gross national product have declined on a long-term basis.

Worst Fires in 1967. Two accidents involving passenger planes caused the worst fires in loss of lives. Thirty-eight persons were killed in an in-flight explosion and crash of a Lake Central Airlines plane near Kenton, Ohio, on March 5, and 34 more lives were lost when a Mohawk Airlines plane crashed and burned near Blossburg, Pa., on June 23.

The worst building fire, in terms of lives lost, occurred atop a 10-story apartment building in Montgomery, Ala., where smoke and flames swept

UPI

SNORKEL No 3
SNORKEL
APARTMENT

MC CORMICK PLACE, Chicago's huge lakefront exhibition hall, was destroyed by fire early on January 16.

LARGE-LOSS FIRES IN THE U. S., 1966
(Individual loss of $250,000 or more)

Classification	Number	Loss
Manufacturing	141	$ 77,530,900
Stores	91	44,772,400
Storage and warehousing	82	60,485,100
Schools and colleges	22	11,288,000
Hotels, motels, apartments, and dormitories	20	9,142,900
Churches	15	6,626,400
Aircraft	10	29,778,900
Bowling establishments	8	3,395,000
Railroad rolling stock, ships, trucks	7	5,958,300
Restaurants	6	1,540,000
Forests	5	8,416,800
Clubs	4	1,995,900
Office buildings	3	2,800,000
Miscellaneous buildings	33	10,928,800
Total	447	$274,659,400

through Dale's Penthouse Restaurant on February 7, killing 25 persons and injuring others.

The costliest fire was the $75 million blaze that swept an Apollo spacecraft during tests on a launching pad at Cape Kennedy, Fla., on January 27, killing three astronauts. The worst building fire occurred on January 16 at Chicago's McCormick Place, the nation's largest exhibition hall, which at that time held nearly 1,000 housewares displays. It cost about $52.5 million, including displays. A fire in the Morgan annex of the New York General Post Office on December 15 destroyed 6,000,000 parcels and pieces of mail to be sent overseas.

1966 Losses. Final NFPA figures for 1966 show that an estimated 2,396,550 fires took 12,100 lives and destroyed property valued at $1,860,500,000. Compared with 1965, the number of fires was up 2.1%, 100 more lives were lost, and dollar losses rose 6.8%. Building fires numbered 970,800 (up 5%) and cost $1,528,000,000 (also up 5%). There were 628,600 fires in houses and apartments in 1966, resulting in 6,500 deaths—2,100 of them children—and property losses of $451,800,000.

Records maintained by the NFPA show that in 1966 U. S. fires in places other than buildings involved aircraft, missiles, and space vehicles (150); motor vehicles (429,000); forests (123,900); brush, grass, and rubbish (832,000); and miscellaneous (40,700).

PERCY BUGBEE
National Fire Protection Association

FISHERIES

The world catch of fish and shellfish continued to increase more rapidly than the human population. The 1966 catch of 61.8 million tons was nearly 7% above 1965. Peru, with a catch of 9.7 million tons, led all other nations, followed by Japan with 7.8 million tons. Other leading countries in order of volume were mainland China, Union of Soviet Socialist Republics, Norway, and the United States.

U. S. Fisheries. The U. S. catch of fish and shellfish in 1967 was about one hundred thousand tons less than the 2.2 million tons taken in 1966. Sharply reduced catches of salmon in Alaska were largely responsible for the decline. Other important items taken in less volume were menhaden in the Gulf of Mexico; and flounders, haddock, ocean perch, and scallops in New England. Species taken in larger volume were anchovies and tuna in California, Pacific hake in Washington, salmon in Washington and Oregon, shrimp in the Gulf states, and alewives in Michigan and Wisconsin. The low salmon run in Alaska—the smallest since 1897—was a disaster for fishermen and packers and also for the state, which depends on it for tax revenue.

The once proud U. S. fishing fleet, which for many years harvested a catch second only to Japan and took over 12% of the world total, was in sixth place with less than 5%. Nearly 70% of the 1967 U. S. supply of fish and shellfish was imported. With only 6% of the world population, the United States received 12% of the world catch in 1967.

Per Capita Consumption. The relatively stable annual per capita consumption of fish and shellfish in the United States (about 10.6 pounds or 4.8 kg edible weight) was threatened in 1967, when meatless Fridays ended for U. S. Roman Catholics on December 2, 1966. By late 1967, however, there had been no significant decline in consumption.

Alewives in the Great Lakes. The alewife, a newcomer to the Great Lakes from the Atlantic coast, greatly concerned fishermen, conservation officials, and the public in 1967. Alewives already dominate the fish population in Lakes Ontario and Huron, and in 1967 made up an estimated 90% of the total weight of all fish in Lake Michigan. The small, bony fish have replaced better food species, clogged water intake systems, and contaminated beaches as a result of annual die-offs. Increased commercial use of the fish for meal, oil, and pet food, along with the planting in the lakes of predatory species that feed on alewives, may eventually control them.

Soviet Fishing in U. S. Waters. The U. S. Department of State signed an agreement with the USSR on Feb. 14, 1967, reducing the annual quota of king crab to be taken by Soviet fishermen in the eastern Bering Sea and regulating Soviet fishing in prescribed areas inside the new U. S. 12-mile limit. Two Soviet trawler captains were fined $5,000 and $10,000, respectively, for fishing too close to shore.

Fish Protein Concentrate (FPC). Early in 1967 the U. S. Food and Drug Administration approved for human consumption the FPC made in separate processes by the Bureau of Commercial Fisheries and the VioBin Corporation. Congress authorized two experimental plants to make FPC by the bureau process.

E.A. POWER
U. S. Fish and Wildlife Service

FISHING. See HUNTING AND FISHING.
FLOODS. See ACCIDENTS AND DISASTERS.

FLORIDA

Claude R. Kirk, Jr., Florida's first Republican governor in 90 years, was the center of events in 1967. On February 18, Kirk, a divorcé, married Erika Mattfeld, a German-born divorcée whom he had met in Brazil. Kirk's flair for making news caused him to be mentioned as a potential candidate for the vice-presidential nomination, especially after Miami Beach was selected as the site for the 1968 Republican convention.

"War on Crime." In his inaugural address on January 3, Kirk announced a "war on crime" to be conducted by a private police force answerable only to the governor and headed by George R. Wackenhut, president of a private detective agency. The private donations which were to have financed the controversial force lagged behind expectations. In May the legislature, at Kirk's request, passed a bill that would have transferred the force's duties to the state. However, Kirk vetoed the bill on the grounds that it infringed on the authority of the governor.

Reapportionment and Elections. The legislature had scarcely assembled when, on January 10, the U. S. Supreme Court ruled that the reapportionment plan adopted in 1966 failed to meet the "one man, one vote" standard. The special session thereupon turned to reapportionment. Dissatisfied with legislative progress, a special three-judge federal court announced its own districting plan on February 8 and ordered new elections prior to the regular session of the legislature beginning April 4.

In the voting on March 28, Republicans made gains in both houses. They increased their Senate seats from 11 to 20; House seats from 26 to 39.

Legislation. Republican gains in the legislature enabled the party to sustain the vetoes imposed by Governor Kirk on appropriations and tax bills. In the regular session, which lasted a record 102 days, the legislature established a new pollution control commission, adopted a code of ethics for itself, revised insurance regulation, and passed a tough traffic safety program. Immediately after adjournment, the legislature was called back into session to consider junior college financing and the abolition of the private police force. From July 31 to September 1, the legislature was again in session, this time to consider constitutional revision.

Education. Governor Kirk's most serious controversy involved the public school teachers. Determined to maintain his campaign promise of no new taxes, Kirk vetoed a $1.536 billion appropriation bill. The amount finally approved was $1.373 billion, with the heaviest cuts in education funds. The Florida Education Association invoked sanctions against the state, and the National Education Association placed Florida on its blacklist of censured states. Threatened teachers' strikes were averted in October by the governor's promise to call a special session on education by January 1968.

FLORIDA • Information Highlights

Area: 58,560 square miles (151,671 sq km).

Population: 5,996,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Tallahassee, the capital, 54,500; Miami, 325,000; Tampa, 305,000; St. Petersburg, 200,000; Jacksonville, 198,000; Fort Lauderdale, 114,000.

Government: *Chief Officers*—governor, Claude R. Kirk, Jr. (Republican); lt. gov., none; secy. of state, Tom Adams (Democrat); atty. gen., Earl Faircloth (D); treas., Broward Williams; supt. of pub. instr., Floyd T. Christian; chief justice, Millard F. Caldwell. *Legislature*—Florida Legislature (met April 4–June 3, 1967; convenes April 8, 1969): Senate, 48 members (20 Republicans, 28 Democrats); House of Representatives, 119 members (39 R, 80 D).

Education: *School enrollment* (1965–66)—public elementary, 752,675 pupils (26,116 teachers); public secondary, 570,066 pupils (23,017 teachers); nonpublic schools, 100,000 pupils (4,010 teachers); college and university (fall 1965), 141,591 students. *Public school expenditures* (1965–66)— $527,998,000 ($458 per pupil); average teacher's salary, $6,435.

Public Finance (fiscal year 1966): *Revenues,* $2,346,783,933 (3% sales tax, $300,872,751; motor fuel tax, $177,426,892; federal funds, $323,394,601). *Expenditures,* $2,344,579,279 (education, $475,988,941; health, welfare, and safety, $251,890,388; highways, $288,643,996). *State debt,* none.

Personal Income (1966): $15,410,000,000; average annual income per person, $2,614.

Public Assistance (fiscal year 1967): $104,688,906 to 237,503 recipients (aged, $58,715,655; dependent children, $26,360,797).

Labor Force (employed persons, Dec. 31, 1966): *Agricultural,* 355,000; *nonagricultural* (wage and salary earners), 1,717,800 (16.1% manufacturing, 26.5% trade, 19% government). *Unemployed persons* (Dec. 31, 1966)—60,100.

Manufacturing (1965): Value added by manufacture, $2,670,785,000 (transportation equipment, $168,199,000; primary metals, $30,875,000; nonelectrical machinery, $103,914,000; electrical machinery, $169,866,000; food and products, $511,217,000).

Agriculture (1966): *Cash farm income,* $1,057,207,000 (livestock, $297,136,000; crops, $741,705,000; govt. payments, $18,366,000). *Chief crops* (tons)—citrus fruits, 8,402,800 (ranks 1st among the states); sugar cane, 6.336,000 (rank, 3d); corn for grain, 418,992; potatoes, 314,700.

Mining (1965 est.): *Production value,* $242,170,000. *Chief minerals* (tons)—stone, 34,888,000; phosphate rock, 20,440,000; sand and gravel, 8,139,000; clays, 949,000; peat, 20,000; crude petroleum, 1,387,000 barrels.

Fisheries (1966): *Commercial catch,* 192,284.403 pounds ($32,451,935). *Leading species*—shrimp, 33,918,073 pounds ($15,153,399); black mullet, 30,057.023 pounds ($2,088,151); blue crabs, 23,870,223 pounds ($1.440,473); Spanish mackerel, 9,185,524 pounds ($1,045,062).

Transportation: *Roads* (1966), 81,507 miles (131,145 km); *motor vehicles* (1966), 3,695,502; *railroads* (1966), 4,650 track miles (7,482 km); airports (1966), 182.

Communications (1967): *Telephones* (1966), 2,796,200; *television stations,* 28; *radio stations,* 259; *newspapers,* 54 (daily circulation, 1,842,000).

UPI

FLORIDA GOV. CLAUDE KIRK and his bride, Erika, prepare to cut towering cake at their February 18 wedding.

The University of Florida got a new president in 1967, when former state supreme court justice Stephen O'Connell succeeded J. Wayne Reitz. Former Justice Alto Adams replaced O'Connell on the bench.

Race Relations. Interracial peace was shattered in Tampa on June 11, when riots broke out in the Negro section and raged for two days and three nights. One person was killed and 15 were injured before the National Guard was able to restore order. Jacksonville, scene of previous racial strife, was calm in 1967. A drive for Negro employment, carried out by the city government and the Chamber of Commerce, was credited with easing tension in that city.

Coppolino Murder Case. In a nationally publicized trial, Dr. Carl Coppolino was found guilty on April 28 of the murder of his wife in Sarasota in 1965. He was sentenced to life imprisonment.

Robert H. Akerman
Florida Southern College

FOOD INDUSTRY

Food prices at retail food stores averaged about the same in 1967 as in 1966. However, the prices of food served away from home—30% of all food consumed—increased about 5%. Volume feeders found themselves plagued with increased labor costs and inability to use labor efficiently for more than a third of the hours worked. Because of these problems, food is being prepared less in kitchens of feeding establishments and more at the point of raw production.

Some major restaurant chains made progress in solving these problems by preparing up to 70% of their foods in centralized processing facilities. Their menu variety, however, was limited to a small number of standard items. The food industry aided other volume feeders by offering convenience foods developed by chefs and dieticians and prepared with efficient mechanized operations under quality control supervision by food technologists. However, as long as convenience foods constituted only a part of the menu, the advantages of labor savings and reduced kitchen equipment and area for preparation were only partially realized.

A breakthrough occurred when the University of Maryland, faced with the problem of providing more than 75,000 meals a day to its student body, demonstrated that a complete changeover to a system using only convenience foods made their advantages realizable. In addition, the new system offered over 400 standard items. The food industry is also offering a variety of special dietary prepared foods so that hospitals can make the complete changeover to the convenience-foods system. In a new building planned for a hospital in Chicago, the convenience food system for serving 2,000 meals a day will save $200,000 in kitchen equipment and $50,000 annually in labor costs.

Imitation Milk. Vegetable-fat-based products have cut heavily into butter and cream consumption. Per capita consumption of butter dropped to less than 5 pounds in 1967 while that of margarine increased to above 10.5 pounds. Imitation milk now poses a similar threat to whole milk. Because the Filled Milk Act prohibits interstate commerce of milk in which vegetable fat has replaced butter fat, the imitation milks must be produced and consumed locally. Although canned evaporated filled milk products are common in many areas, numerous attempts in the past by small companies to market imitation milk as fresh fluid milk have not been successful. In 1967 several large dairy processors added imitation milk to their product line and promoted it on the basis of lower cost, milder flavor, high protein content, fortification with vitamins, and freedom from animal fat. Figures for central Arizona show that imitation milk increased its share of fluid milk sales from 1.7% to 5.4% in one year.

U. S. FOOD INDUSTRY

Group	Employees[1]		Value added by manufacture (billions)		Value of shipments (billions)	
	1964	1965	1964	1965	1964	1965
Meat and poultry products	305,000	298,000	$ 3.1	$ 2.9	$17.6	$18.6
Dairy products	252,000	246,000	3.4	3.3	11.7	11.6
Canned, preserved, frozen foods	244,000	249,000	2.9	3.1	6.7	8.2
Grain mill products	110,000	108,000	2.4	2.4	8.3	8.4
Bakery products	280,000	277,000	3.2	3.2	5.8	5.9
Sugar (raw and refined)	33,000	31,000	.5	.6	2.1	2.0
Confectionery and related products	80,000	79,000	1.0	1.1	2.3	2.3
Beverages, alcoholic and nonalcoholic	209,000	210,000	4.0	4.1	7.4	7.7
Miscellaneous products[2]	135,000	134,000	2.6	2.6	8.6	9.2
Total[3]	1,648,000	1,632,000	$23.1	$23.3	$70.5	$73.9

[1] Excludes employees at central administrative offices, distribution warehouses, and other auxiliary establishments. [2] Includes animal and vegetable oils and fats, roasted coffee, macaroni, potato chips, etc. [3] Details may not add to totals because of rounding. (Source: U.S. Bureau of the Census.)

Textured Vegetable Protein. A whole new food category is based on protein that is extracted from low-cost soybeans and processed to impart textures such as those in meat fibers or nuts. The U. S. Food and Drug Administration (FDA) is considering petitions for establishing a standard of identity for this new class of food. When introduced, the new products were used to supply protein in vegetarian diets as analogs of ham, beef, chicken, seafood, and bacon.. In addition they are now finding application in various snack foods and in improving the characteristics of other processed foods.

Irradiation. The development of processes for preservation of foods by radiation is still being actively pursued by the Atomic Energy Commission and the armed forces. The development continues despite the rather unfavorable judgment of President Johnson's Scientific Advisory Committee that "technical problems indicate that food irradiation is not likely to have a significant application for food preservation in the foreseeable future." The firm of Irradco, Inc., was awarded a government contract to build the first privately owned, large-scale food irradiation plant in the country. The first item to be processed in quantity will be ham—for the Army and for Thompson Farms of Chicago. The production facility, however, will not be erected until irradiated ham has been cleared by FDA as safe for consumption. Clearance is expected in 1968. The U.S. Department of the Interior continues to sponsor experimental work on prolonging the shelf life of fresh seafood by use of pasteurizing doses of irradiation aboard ship. (See also ATOMIC ENERGY.)

Tin-Free Cans. Two major can companies began production of tin-free cans in 1967. American Can uses a cemented side seam; Continental Can welds the side seam. The result is a stronger can of steel that costs about two tenths of a cent less (for an 8-ounce size).

New Food Products. Statistics on new food products in the supermarkets can be misleading unless newness is defined. To a supermarket, a new item is simply any product added to stock for the first time. It may be a new package size, a new flavor, or a new variety of an existing brand—or it may be distinctly different in form or basic ingredients or method of use in the home. In one typical large chain, the dollar volume of new items introduced annually since 1960 has been 10–11% of total annual sales. Distinctly new types of products, however, were only about 0.2% of total annual sales in 1960, 0.9% in 1962, and 1.3% in 1964.

The development of distinctly new types of food products is now dominated by large food processors. One study reports that in 1964 average expenditures per new product amounted to $68,000 for technical research and development, $26,000 for market research, and $248,000 for test marketing. In the first year of regular distribution, marketing expenditures average 43% of sales at factory prices—more than three times as great as the average rate of marketing expenditures for all processed foods.

HOWARD P. MILLEVILLE
"Food Processing & Marketing"

FOOTBALL. See SPORTS.

FOREIGN AFFAIRS. See AFRICA; ASIA; EUROPE; FOREIGN POLICY; and the articles on countries.

FOREIGN AID

UPI

AMERICAN AID has changed the landscape of Iran. A cement plant, built with U. S. assistance, typifies progress that led Iran to the point of needing no more aid.

FOREIGN AID

United States foreign economic aid commitments from all sources totaled $5,290 million in 1967, about the same as the $5,249 million the previous year. This includes capital subscriptions to international organizations and funds from the Agency for International Development (AID), Food for Freedom, Export-Import Bank, Peace Corps, and other programs.

Both foreign and domestic factors pointed toward a potential downturn in the U. S. aid level in the near future. Although prosperity climbed generally in western Europe and Japan, the United States experienced a severe balance-of-payments deficit and was making heavy expenditures for the Vietnam War. Domestic pressure against foreign aid was nurtured by opposition to the war and the extent of U. S. commitments abroad, by a large federal deficit, by demands for more social welfare at home, by protectionism, rising prices, and proposed tax increases.

A recalcitrant Congress slashed President Johnsons' proposed 1968 Foreign Assistance Act appropriation, the main source of aid funds, by almost $1 billion in voting a record low $2.3 billion—$1.9 billion for economic aid and $400 million for arms.

Terming the congressional action shocking, AID Administrator William S. Gaud voiced fear that the effect of the cut globally would be multiplied through future corresponding cuts by other advanced nations sharing in aid programs and by increased reluctance of aid-receiving countries to undertake needed economic reforms in expectation of U. S. help.

U. S. Aid Purposes. The broad national interest continued to serve as the primary justification for further foreign aid. Applying his domestic Great Society concepts overseas, President Johnson portrayed hunger, disease, and ignorance as potential breeders of violence abroad that, if unchecked, could cost America dearly in money and lives. The President said in his 1967 annual foreign aid report that by combating these "oldest enemies" of mankind among the impoverished masses of Asia, Africa, and Latin America, aid wins "victories of prevention . . . the shots that did not sound, the blood that did not spill, the treasure that did not have to be spent to stamp out spreading flames of violence."

Arms aid was extended on grounds that it strengthened the common defense of the non-Communist world. Strategists also calculated that aid programs, even where small, helped maintain a U.S. presence and prestige and, they hoped, some political leverage in aid-receiving countries.

Programs and Policies in 1967. The Johnson policy of focusing on the hunger-disease-ignorance triad had its first full year of implementation in 1967. Under a new Food for Freedom program (Public Law 480) keyed to promoting farm production in aid-receiving countries, U. S. commodity sales, loans, and grants totaled $1,040 million and AID earmarked a further $497 million for foreign agricultural development. Health programs received $156 million and education $189 million.

UPI

THAILAND'S young people learn modern skills with the help of American aid funds. Here, boys are taught engine repair. Signs in 1967 pointed to a downturn in volume of U. S. aid.

AID established a central War on Hunger Office to supervise the multifaceted agriculture program and the companion effort to curb the population explosion in hungry lands. It combined direct U. S. food shipments with financing of technical assistance, fertilizer, machinery, and construction projects aimed at increasing foreign farm output. The new U. S. policy of supporting foreign family planning advanced a notable step when Gaud announced in April that U. S. funds could be used, upon request of the recipient nation, to buy U. S. contraceptives or to manufacture contraceptives abroad.

Health programs concentrated on fighting communicable diseases, training local health workers, and alleviating malnutrition in mothers and children. Millions of persons in the underdeveloped continents were vaccinated against measles, smallpox, and cholera. Special vitamin and mineral enrichment was added to U. S. Food for Freedom shipments to 88 countries. Training of foreign physicians, nurses, and auxiliaries was stepped up 67%.

In education, less-developed areas received expanded U. S. help in specialized, technical, and basic schooling. More than 21 million students abroad were enrolled in U. S.-assisted schools of various types. Projects to train foreign teachers and administrators and strengthen their educational institutions got priority.

The long-term objective of U. S. economic assistance remained that of raising aid-receiving countries to the point where they no longer require outside financing on noncommercial, "soft" terms. During 1967, Iran was added to the slowly growing list of nations deemed to have reached this level. For fiscal 1968 U. S. authorities scheduled only $300,000 in terminal economic aid for Iran. (See also IRAN.)

Some other countries went off the list for political reasons. Yemen ousted the small U. S. economic program in April after accusing American aid workers of trying to blow up the city of Taiz—charges that Washington denied. The Israeli-Arab war in June disrupted aid efforts generally in that area and by the end of the year U. S. programs for Egypt, Sudan, and Algeria had not been resumed. But Indonesia, once off the U. S. aid list during the Sukarno regime, received a $65 million American contribution in a $200 million, 11-nation pledge for her foreign exchange requirements.

With $2,249 million in economic assistance to some 70 countries in 1967—$296 million drop from 1966—AID continued to concentrate on a relatively few nations where it hoped to achieve the most. More than 90% of its $718 million in what is called "supporting assistance"—grants to countries in which the United States has a high security interest—went to the Dominican Republic, Jordan, South Korea, Laos, Thailand, and South Vietnam. Three quarters of its $1.1 billion in "development loans"—those linked to self-help by the recipients—went to Brazil, Colombia, India, Korea, Pakistan, and Turkey.

United States aid to the Middle East and South Asia region focused on boosting agricultural output. In Africa, where the United States had bilateral programs with 35 states, policymakers decided to shift to multicountry, regional programs in the future except for 10 nations with which America has special relationships. In East Asia and Oceania, U. S. aid went into both agricultural and industrial projects, again with growing emphasis on regional and multilateral undertakings.

The program for South Vietnam was unique because of the war. A separate Bureau for Vietnam was set up in AID's Washington headquarters to handle it. The dollar level of economic help was

U. S. FOREIGN ASSISTANCE ACT
(Fiscal Year 1968 Presidential Appropriation
Requests and Congressional Action—
in millions of dollars)

Type of Appropriation	Requested by President	Appropriated by Congress
Economic assistance		
Development loans	$ 774	$ 435
Technical cooperation and development grants	242	180
Alliance for Progress	643	469
Development loans	533	389
Technical cooperation and development grants	110	80
Contingency fund	31	10
Supporting assistance	720	600
International organizations and programs	141	130
American schools and hospitals abroad	14	12[1]
Pre-investment assistance	2	1
Administrative expenses: AID and State Department	62	58
Economic assistance total	2,630	1,896
Military assistance	596	400
Foreign Assistance Act total	$3,226[2]	$2,296[2]

[1] In addition, $6 million in excess foreign currencies was appropriated for five institutions in Israel. [2] Detail may not add to totals because of rounding.

Note: Public Law 90–249: also continued available any unobligated balances as of June 30, 1967; appropriated $300 million for the first installment of the U.S. share in the 1968–70 increase in the resources of the Inter-American Development Bank's Fund for Special Operations; $104 million for payment of the third installment of the U.S. supplementary contribution to the International Development Bank; and $107.5 million for the Peace Corps. Title III of the act provided limitations on the program activity and administrative expenses of the U.S. Export-Import Bank.

(Source: Statistics and Reports Division, Agency for International Development.)

U. S. OVERSEAS LOANS AND GRANTS

(New obligations and loan authorizations—in millions of dollars)

	Fiscal year	
	1966[1]	1967[2]
Type of program		
Total U.S. economic loans and grants	$5,249[3]	$5,290[3]
Capital subscriptions and contributions to international organizations, other than through AID		
Asian Development Bank	...	20
Inter-American Development Bank	250	250
International Development Association	104	104
Subtotal	354	374
Other economic programs:		
Agency for International Development	1,545	2,249[4]
Loans	1,219	1,087
Grants	1,326	1,162
Food for Freedom sales, loans, and grants	1,754	1,040
Export-Import Bank long-term loans	418	1,457
Latin American Social Progress Trust Fund	24	2
Peace Corps	113	105
Other	42	62
Subtotal	4,895	4,916
Total U. S. military loans and grants	1,442	1,647
Foreign Assistance Act credits and grants	1,184	1,103
Export Import Bank loans	258	545
Total U.S. economic and military loans and grants	6,691	6,938
Detail by region		
Near East and South Asia	$1,784	$1,673
Economic	1,484	1,251
Military	300	422
Latin America	1,354	1,486
Economic	1,270	1,398
Military	84	88
Vietnam	943	542
Economic	729	542[4]
Military	213	...[5]
East Asia	896	996
Economic	575	588
Military	321	407
Africa	406	421
Economic	384	388
Military	22	32
Europe	564	987
Economic	318	503
Military	246	484
Oceania	176	314
Economic	25	126
Military	151	188
Nonregional	568	519
Economic	463	494
Military	105	26

[1] Revised from previously published figures. [2] Preliminary. [3] Detail may not add to total because of rounding. [4] Excludes $43.1 million reimbursements by the Department of Defense for grants to Vietnam. [5] Military assistance to Vietnam under the Foreign Assistance Act has been transferred to regular Department of Defense funding. (Source: Statistics and Reports Division, Office of Program and Policy Coordination, Agency for International Development.)

reduced to $542 million in 1967 from $729 million the previous year, mainly because higher Vietnamese foreign currency holdings allowed a drop in the Commercial Import Program for U. S. financing of imports to combat inflation. Higher amounts were devoted to projects aimed at winning popular support in the countryside, ranging from classroom building to medical and refugee care.

The Alliance for Progress program for Latin American development received $1,486 million worth of U. S. economic aid, up $132 million from 1966. This included $556 million from AID, $492 million from the Export-Import Bank, $70 million in Food for Freedom shipments, and $368 million from the Inter-American Development Bank and other sources. The hemisphere heads of state met at Punta del Este, Uruguay, in April to breathe new life into the program. The presidents called for accelerated development and set a 1970–85 timetable for bringing into being a Latin American common market. (See also LATIN AMERICA.)

Arms Aid. Total U. S. military loans and grants abroad were listed at $1,647 million in 1967. This figure is not comparable with prior years because a large and undisclosed amount for South Vietnam was shifted into the regular U. S. defense budget.

Weapons shipments went to 36 countries, under a legislative restriction holding the number to no more than 40. Nearly 80% of the total went to seven nations ringing the Sino-Soviet perimeter from Korea to Turkey, although no arms grants went to India or Pakistan.

The U. S. program for Japan was terminated with her assumption of full payment for her own forces.

LEWIS GULICK
Diplomatic Affairs Reporter, Associated Press

FOREIGN INVESTMENTS

Net outflows of U. S. private capital rose to $4.2 billion in 1966, nearly 15% over the amount recorded for 1965. The outflows in the first half of 1967 were about the same as in the first half of 1966, indicating an annual outflow for 1967 of about the same amount as in 1966.

Direct investment flows rose slightly in 1966 to $3.5 billion (compared with $3.4 billion in 1965), but continued at a somewhat reduced level in the first half of 1967. Foreign securities issued in the United States remained level at $1.2 billion for 1966, but indications were that 1967 totals would be higher.

Other types of capital transactions resulted in inflows from abroad of $500 million in 1966, in sharp contrast to early developments in 1967 when these capital flows resulted in a small outflow. Long-term government credits and claims (net of repayments) rose by $900 million (compared with $1.6 billion in 1965) while short-term government claims declined.

These capital outflows—together with reinvested earnings on direct investments of $1.7 billion, changes in market prices of foreign securities, and improved reporting—raised the cumulative total of U. S. foreign investments to nearly $112 billion at the end of 1966, and the total of private U. S. investments abroad to $86 billion.

Direct Foreign Investments. New investments by U. S. companies in Europe accounted for the largest portion—about 44%—of the additional direct investments (capital flows and retained earnings) in 1966, and rose to more than 50% of the total in the first half of 1967. In 1966 new direct foreign investments included about $550 million to acquire existing foreign enterprises, nearly twice as much as U. S. investors spent for that purpose in the prior year. About three quarters of these investments represented acquisitions of European enterprises.

The cumulative value of direct investments in western Europe was $16.2 billion at the end of 1966, about $2.2 billion or nearly 16% more than at the end of 1965. Investments in manufacturing industries in Europe increased about $1.3 billion to a total of $8.9 billion at year-end. Investments by oil companies rose by more than $500 million to a cumulative total of nearly $4 billion.

Nearly half ($7.6 billion) of the total European investments at the end of 1966 were located in Common Market countries, including $3.1 billion in Germany. Investments in Britain were about $5.7 billion at the end of 1966, up $530 million from the 1965 total. Investments in other European countries rose by about $400 million to nearly $3 billion.

Canada. U. S. capital outflows to Canada continue to set records. The 1966 figure was $1.1 bil-

INTERNATIONAL INVESTMENT POSITION OF THE UNITED STATES
(By area and type of investment, 1965–66, in millions of dollars)

Type of investment	Year-end 1965[1] Total	1966[2] Total	Western Europe	Canada	Latin American republics	Other foreign countries	International institutions unallocated
U.S. investments abroad, total	106,174	111,874	32,187	27,529	19,387	28,207	4,564
Private investments	81,051	86,235	23,353	27,519	15,183	17,037	3,143
Long-term	70,898	75,565	20,726	26,394	12,335	12,967	3,143
Direct investments	49,328	54,562	16,200	16,840	9,854	9,652	2,016[4]
Foreign dollar bonds	9,115	9,512	790	5,503	560	1,532	1,127
Other foreign bonds[5]	1,050	1,030	64	748	174	44	...
Foreign corporate stocks	5,048	4,324	1,570	2,474	78	202	...
Banking claims[6]	4,317	3,980	1,212	114	1,308	1,346	[3]
Other[7]	2,040	2,157	890	715	361	191	...
Short-term	10,153	10,670	2,627	1,125	2,848	4,070	[9]
U.S. government credits and claims	25,123	25,639	8,834	10	4,204	11,170	1,421
Long-term[8]	20,318	21,182	7,308	...	4,094	8,690	1,090
Short-term	4,805	4,457	1,526	10	110	2,480	331
Foreign assets and investments in the U.S., total	58,739	60,389	35,168	8,093	5,861	8,701	2,566
Long-term	26,374	27,000	17,851	4,539	1,939	1,878	793
Direct investments	8,797	9,054	6,273	2,439	177	165	...
Corporate stocks	14,599	12,643	8,743	1,933	1,076	800	91
Corporate, state, and municipal bonds	875	2,042	1,535	31	85	54	368
Other investments	2,103	3,261	1,300	167	601	859	334
Short-term assets and U.S. govt. obligations	32,365	33,389	17,317	3,554	3,922	6,823	1,773
Private obligations	18,163	20,796	9,713	2,042	3,691	5,061	289
U.S. government obligations	14,202	12,593	7,604	1,512	231	1,762	1,484
Bills and certificates	8,356	8,064	4,929	623	83	1,448	981
Marketable bonds and notes	3,530	1,969	854	692	81	92	250
Nonmarketable bonds and notes	165	116	113	...	...	3	...
Other	2,151	2,444	1,708	197	67	219	253
Net debtor (−) or creditor (+) position	+ 47,435	+ 51,485	− 2,981	+19,436	+13,526	+19,506	+1,998

[1] Revised. [2] Preliminary. [3] Less than $500,000. [4] Represents the estimated investments in shipping companies registered primarily in Panama and Liberia. [5] Consists primarily of securities payable in foreign currencies but includes some dollar obligations, including participations in loans made prior to 1963 by the International Bank for Reconstruction and Development. Effective in 1963, participation in IBRD loans are included under banking claims and "other" long-term investments, according to country or obligor. [6] Excludes $200 million netted against a related inflow of U.S. direct investment capital. [7] Includes $254 million loaned to Canada for Columbia River power development. [8] Excludes World War I debts that are not currently being serviced. [9]Negligible. (Source: U.S. Department of Commerce, Office of Business Economics.)

lion—20% above the record level of 1965. Of this, about $550 million went into manufacturing enterprises, and about $260 million was invested in finance, trading, and other service industries. About $280 million went into petroleum and mining ventures, partly in the development of new oil and mineral resources. In the first half of 1967, however, these outflows to Canada were strongly reduced. Inclusive of $540 million of earnings reinvested during 1966, direct investments in Canada rose by $1.6 billion to a total of $16.8 billion at the end of 1966.

Other Countries. U. S. companies continued to increase investments in other developed countries, principally Australia, Japan, and South Africa. More than half of these new funds were invested in manufacturing facilities. Direct investment in the less-developed countries of Latin America, Africa, and Asia rose by $1 billion in 1966. More than 60% of these new investments were in the Western Hemisphere. Outstanding investments in Venezuela declined because of return flows of capital from oil operations. Investments in most other Western Hemisphere countries expanded, particularly in Brazil and in the Caribbean areas.

Earnings of Direct Investments. Although the value of U. S. direct investments abroad increased by 11% in 1966, earnings rose by only 4%. In 1966 the earnings of foreign branches, subsidiaries, and other foreign affiliates of U. S. parent companies amounted to $5.7 billion, providing a yield of 11.5% on invested capital.

Earnings of manufacturing enterprises abroad reached $2.1 billion in 1966 because of gains in Latin America and, to a lesser degree, in Canada. Earnings in western Europe and the rest of the world were unchanged from 1965 levels. Mining enterprises strongly improved their earnings performance in all areas except Canada. On the whole, oil profits remained stable.

In 1966 the distribution of income to U. S. owners in the form of dividends, interest, and branch profits remained relatively unchanged at $4 billion. Income from mining enterprises rose 20% to $520 million, but revenue from all other industries continued at the level of the preceding year. Income from the oil industry amounted to $1.8 billion, and manufacturing firms accounted for $1.1 billion.

Royalties and fees from foreign direct investments continued as an increasingly significant supplement to total receipts of U. S. parent companies. In 1966 these royalties and fees amounted to $1,045,000,000, or about 13% above the 1965 amount. Two thirds of this amount was derived from manufacturing.

Other Foreign Investments. Transactions by Americans in foreign securities resulted in outflows from the United States of $500 million in 1966. In that year U. S. investors purchased about $1.2 billion of new foreign dollar issues. Retirements of prior issues amounted, however, to $400 million, and other transactions in foreign securities resulted in additional inflows of $300 million. Of the new foreign dollar issues sold in the United States, Canada accounted for more than $1 billion in 1966. In the first half of 1967, an additional $760 million of these issues were placed in the United States, with Canada accounting for $500 million.

Foreign Investments in the United States. Foreigners continued to liquidate their holdings in U. S. corporate stocks in 1966 and early 1967. They shifted their funds to corporate and U. S. government agency bonds and to bonds of state or municipal governments. Flows of foreign capital for direct investment in the United States remained relatively small, amounting to about $100 million for 1966. Additions to these investments from reinvested earnings were $340 million, bringing total foreign direct investments in the United States to $9.1 billion at year-end. More than two thirds of these investments were owned in Europe, and most of the rest were held by Canadian parent companies.

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FOREIGN POLICY OF THE U.S.

UPI

AT A CONFERENCE on Guam in March, Dean Rusk, President Johnson, and Robert McNamara (*rear*) confer with Chief of State Thieu and Premier Ky of South Vietnam.

FOREIGN POLICY OF THE UNITED STATES

The deepening and seemingly endless U. S. military involvement in the war in Vietnam remained the dominant foreign policy issue—in fact dominated all other issues, foreign and domestic—in political debate in the United States during 1967. Criticism of the administration's policy in Vietnam mounted rapidly in both public and governmental circles during the year, and for the first time conspicuous numbers of critics went beyond considerations of the wisdom or rightness of the policy to raise fundamental questions about the policymaking process and the limits of executive power in respect to U. S. military commitments overseas.

Vietnam. In an address in San Antonio, Texas, on September 29, President Johnson expressed his determination to persevere in the war until North Vietnam indicated a readiness to negotiate. He said the object of the war was to contain communism, which would probably spread to all of Southeast Asia and beyond if not controlled, and for the first time he specifically cited U. S. security as an important reason for U. S. involvement.

President Johnson declared in his San Antonio address that the war was moving favorably for the United States. He also commented approvingly on the support of his Vietnam policy by the governments of South Korea, the Philippines, Thailand, Malaysia, Singapore, Australia, and New Zealand. However, outside these seven countries and the United States—with less than 10% of the world's population—there was increasing criticism of U. S. policy and an increasing demand for cessation of the bombing in North Vietnam, which Ho Chi Minh had made a prerequisite for any discussion of negotiation.

In the course of the year, peace groups and foreign governments increased pressure for unconditional cessation of U. S. bombing of North Vietnam, expressing the belief that such an act would lead to negotiation. But the U. S. military authorities opposed such action, claiming that bombing was necessary to check the flow of arms and men to the South.

Inside the United States approval of President Johnson's policies on Vietnam declined sharply in the opinion polls, from more than 50% by some counts to less than 25%. Gerald Ford, Republican leader in the House of Representatives, and other legislators identified with the "hawks," criticized the President for not permitting more thorough bombing and not authorizing a blockade of the port of Haiphong, through which the Soviet Union was supplying Hanoi. The hawks generally thought such bombing would bring the war to a speedy end with victory. On the other hand, the "doves," such as Democratic Senate leader Mike Mansfield, Chairman of the Senate Foreign Relations Committee J. William Fulbright, and several former members of President Kennedy's administration, criticized the President on the grounds that his efforts toward negotiation were unrealistic and unsuccessful. The doves generally feared that China or the Soviet Union might intervene if attacks on North Vietnam were broadened. The military wholeheartedly supported the hawks, while Congress, the leaders of both political parties, and the people remained deeply divided.

The President professed to be following a middle-of-the-road policy on escalation. He reiterated a willingness to negotiate—although, his opponents said, on terms that were almost sure to be unacceptable to the North Vietnamese and the Vietcong. At the same time he continued to escalate the war as recommended by the Joint Chiefs of Staff. Secretary of Defense McNamara supported the President's middle-of-the-road policy, as he saw it, by emphasizing the danger of widening the war. He urged that an electronic barrier be built south of the demilitarized zone dividing North and South Vietnam and expressed his belief that a device of that kind would be both cheaper and more effective than the bombing in inhibiting infiltration from the North. Independently, the Senate Preparedness Investigating Subcommittee reported on October 11 that by the end of March 1967 the U. S. had lost aircraft worth $911 million in destroying property worth only $180 million in North Vietnam.

In a televised press conference on October 12, Secretary of State Rusk vigorously affirmed the President's position and said that American security was threatened by the prospect "in the next decade

RENI PHOTOS

WALT W(HITMAN) ROSTOW was appointed in March 1966 as special presidential assistant for the development of long-range foreign policy. As the President's chief foreign policy aide, he took part in a number of important diplomatic conferences during 1967. In June he was present at summit talks between President Johnson and Soviet Premier Kosygin at Glassboro, N. J.

Rostow was born in New York on Oct. 7, 1916. He graduated from Yale (B. A., 1936; Ph.D., 1940) and studied at Oxford as a Rhodes scholar (1936–38). During World War II he served with the Office of Strategic Services, and in 1950 he became professor of economic history at the Massachusetts Institute of Technology. A trusted adviser to President John F. Kennedy, he was appointed his deputy special assistant for national security affairs, as well as counselor of the State Department, in 1961. A reputed "hard-liner" on relations with Communist states, Rostow is the author of a number of books on economics and foreign policy.

or two of a billion Chinese on the mainland armed with nuclear weapons." Rusk denied that he had invoked the idea of the "yellow peril," as Sen. Eugene McCarthy of Minnesota and other commentators asserted. However, Rusk's emphasis on containing China and maintaining the balance of power in Asia seemed to his critics to escalate the objectives of the war, which had originally been declared to be collective defense of South Vietnam. Furthermore, it raised doubts whether widespread destruction in Vietnam would achieve either objective.

China. The United States appeared to be moving toward a "two-China" policy, by which the Peking government would represent China in the United Nations and Taiwan would continue to be a member with a seat in the General Assembly but not in the Security Council. It seemed unlikely that either Peking or Taipei was ready to accept this policy; but the Vietnam situation, the continuing demand in the United Nations for representation of mainland China, and the need for Chinese participation in the nonproliferation and other arms-control treaties indicated the advisability of modification of the U. S. policy of nonrecognition and opposition to UN membership for a nuclear power with a quarter of the world's population.

Middle East. In a 6-day war that broke out on June 5, Israeli forces occupied Egyptian, Jordanian, and Syrian territory twice as large as the area established as the entire state of Israel in the 1949 armistice agreement ending the first Israeli-Arab war. The outbreak in June ending a period of anxious watching and waiting that had begun on May 18 when U Thant announced that the UN Emergency Force policing the troubled borders would be withdrawn the next day at Egyptian request.

Immediately after the removal of the UN force, troops of the United Arab Republic moved up to the Israeli frontier, and President Nasser announced a blockade of the Gulf of Aqaba and the Straits of Tiran, Israel's vital sea route to the Red Sea. The United States, which had committed itself in 1956 to assuring Israeli access to the Red Sea, tried to avoid taking sides. On May 23, President Johnson expressed his government's belief that the blockade was illegal. He described free passage of international shipping through the gulf as "a vital interest of the international community," but went on only to request that the UN seek "a clarification of this point." Johnson's critics in the United States quickly drew comparisons between the government's massive military assistance to South Vietnam and its reluctance to commit any forces whatever to preserve the vital interests of Israel.

After Israel's shattering defeat of the Arab armies, Ambassador Arthur Goldberg presented the U. S. position to the United Nations. He proposed termination of Arab belligerency against Israel, settlement of the Arab refugee problem, opening of the Straits of Tiran and the Suez Canal to Israeli shipping, and respect for the territorial integrity of all Middle Eastern states.

Greece. Although accused by the Soviet press of initiating the military coup in Greece in April, and accused by Greece of supporting Turkey and by Turkey of supporting Greece in the Cyprus situation, the United States seems to have sought to maintain a detached position in these crises. It cut off military aid to Greece after the coup and continued to support the presence of UN peace-keeping forces in Cyprus. When Greece and Turkey threatened war over Cyprus in November, President Johnson sent a special envoy, Cyrus R. Vance, to persuade both countries to desist. Vance's mission was at least temporarily successful—partly because of Soviet sufferance.

Soviet Union. Many Americans, including former Undersecretary of Defense Roswell Gilpatrick, agreed with most Europeans that by 1967 the cold war was coming to an end. During the year the United States continued to seek a détente with the Soviet Union through cultural exchanges and agreement on a draft treaty to prevent the further spread of nuclear weapons, which was jointly submitted to the UN Disarmament Committee on August 24. In addition, Congress ratified a treaty establishing consulates in both countries and a treaty to ban weapons of mass destruction in outer space.

The policy of détente was seriously hampered by continuing U. S. escalation of the Vietnam war and increasing Soviet material support of North Vietnam. It was apparent that efforts to settle most local disturbances peacefully depended on U. S.–Soviet cooperation. On June 23 and 25, in the wake of the Israeli-Arab war, Soviet Premier Kosygin and President Johnson held a summit meeting at Glassboro, N. J., to try to arrive at a general understanding. The meeting was widely acclaimed, but evidence of any significant progress was not forthcoming.

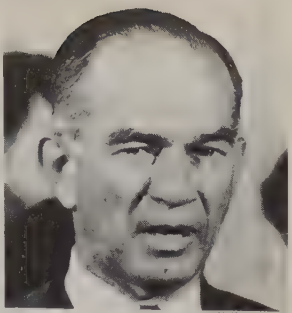
Meanwhile Communist China and Albania interpreted the joint effort to effect a détente as a move of the superpowers to divide the world between them.

Europe. In spite of President de Gaulle's withdrawal of France from military cooperation in NATO, the United States continued to support that organization as a necessary deterrent to Soviet expansionism in Europe. In general the U. S. acted with restraint toward de Gaulle's policy of seeking to create a "third force" in Europe.

Fortunately for the United States, the rest of Europe was less attracted than France by de Gaulle's design for a united Europe under French hegemony.

J(AMES) WILLIAM FULBRIGHT, chairman of the Senate Foreign Relations Committee, remained in 1967 a leading critic of U. S. involvement in Vietnam. The Arkansas Democrat proposed measures aimed at reasserting the role of Congress in making international commitments. On August 8 he linked the Vietnam conflict with domestic racial violence and declared that the Great Society was "a sick society" as a result of the "unnecessary and immoral war."

Fulbright was born in Sumner, Mo., on April 9, 1905. He attended the University of Arkansas and Oxford University as a Rhodes scholar and, after graduating from George Washington University (LL.B., 1934), served with the Justice Department. Later he taught law at both George Washington and Arkansas universities, and from 1939 to 1941 he was president of the latter. In 1943 he entered Congress, and since 1945 he has served in the U. S. Senate. In 1954 he was a delegate to the UN. He is the author of *Old Myths and New Realities* (1965) and *The Arrogance of Power* (1967).



WIDE WORLD

Continuing fundamental cooperation between Britain and West Germany on the one hand and the United States on the other was symbolized by meetings of heads of state in Washington during the year.

Africa. U. S. policy in Africa depended more on words than on deeds in 1967. The government supported UN resolutions introduced by African states to put the world community on record against colonialism and racism, but it refused to commit itself to sanctions that were urged by the African states and that would make the resolutions meaningful. And when, in a rare instance of actual commitment of materiel, the administration sent three transport planes to the government of the Democratic Republic of Congo, which was being threatened by a well-armed force of white European mercenaries, the congressional outcry forced the administration to withdraw its help quickly.

Likewise the United States supported in theory the integrity of the Federation of Nigeria against the dissolution threatened by secession of the self-styled state of Biafra. But on July 11 a spokesman of the federal government of Nigeria accused the United States of refusing to grant permits for private export of arms to the government. It appeared that the U. S. was exercising restraint in Africa.

Latin America. The United States continued to rely on the Alliance for Progress as its main instrument for helping improve the economic and political stability of Latin America, but progress toward both goals appeared to be slow. Nevertheless, U. S. planners expressed satisfaction that Cuban-based Communist subversion appeared to be a failure on the continent of South America. Cuban-inspired insurgencies in Venezuela and Bolivia collapsed during the year, and on October 10 the Bolivian Army high command reported that Ernesto (Che) Guevara, Premier Castro's former minister of production in Cuba, had died the day before, following a battle near Higueras.

Public Opinion. Concern over the Vietnam war, over racial rioting in major U. S. cities during the summer of 1967, and over the prospect of rising taxes combined to threaten American support of the Johnson administration's foreign policy. The image of the United States as a mature champion of peace, democracy, and the United Nations had deteriorated in most of the world, and the American people seemed to be wondering where their country was going. Dissident groups—pacifist, racial, liberal, and conservative—became louder in their protests.

The general pessimism of the world was reflected by Secretary-General U Thant in a somber report to the 21st General Assembly in September. Thant commented on the serious situations in Vietnam and the Middle East and the widening economic gap between developed and developing countries as population growth in the latter outpaced production. Although the United States made extensive grain shipments to India to avert a serious famine there, it otherwise reduced its programs of overseas economic assistance in view of congressional concern over a prospective record-making deficit as a result of the war. In November Congress passed a $2.7 billion foreign aid authorization, but later in the year it appropriated only $2.3 billion—the smallest aid appropriation in the program's 20-year history.

There was also much public discussion about the increasing role of the military in making foreign policy. It was stimulated by a running controversy between Secretary of Defense Robert S. McNamara and the Joint Chiefs of Staff on the limitation of bombing in North Vietnam and the anti-ballistic missile program. Increased public speculation on the possibility of a serious rift among President Johnson's top advisers followed a November 27 news leak that Johnson had nominated McNamara to head the World Bank.

Congress. The disturbed state of public opinion was reflected in congressional debates, in which critics charged that the constitutional balance between executive and legislative authority had been upset by presidential actions in making foreign commitments and initiating war without congressional consent. The Tonkin Gulf resolution of 1964, by which the President sought to justify the administration's escalation of the Vietnam War in 1967, was a case in point. Fulbright and most other members of the Senate Foreign Relations Committee insisted that their vote for the resolution implied no intention to endorse in advance the level of fighting that had since been reached. Others pointed out that the President has always had the initiative in making foreign policy and war. It was recognized that Congress could exert an influence by advisory resolutions, control of appropriations, and exercise of its powers to declare war and ratify formal treaties; but in the increasingly complex, changing, and dangerous world these powers could not check presidential initiatives, which, once taken, had a habit of becoming commitments. On November 16, by unanimous vote, the Senate Foreign Relations Committee adopted a resolution providing that the President not commit U. S. forces in overseas conflicts without a prior affirmative action by Congress.

(See also MIDDLE EAST; NATIONAL DEFENSE; UNITED NATIONS; UNITED STATES; and biographies of JOHNSON and RUSK.

QUINCY WRIGHT
University of Chicago

FOREIGN TRADE. See INTERNATIONAL TRADE.

FORESTRY AND LUMBERING

Forestry highlights of 1967 included new wilderness area proposals, new park proposals, and heavy use of forest recreation areas. New heads were named at several important forestry schools in the United States during the year, and funds appropriated for the U.S. Forest Service reached a new high.

Wilderness System. The San Rafael Wilderness in California was proposed for inclusion in the National Wilderness Preservation System. The San Rafael area would be the first addition to the system since it was created by the Wilderness Act of 1964. In 1967, President Johnson recommended this area for approval by Congress following studies and public hearings conducted by the Forest Service. The Forest Service prepared recommendations on 12 other areas in national forests for presentation to Congress later in the year. Additional proposals for new wilderness areas in national parks and wildlife refuges were prepared by the Department of the Interior.

Following a special study by a federal committee of the North Cascade mountain range in the state of Washington, the administration recommended the establishment of a North Cascade National Park, a national recreation area, and enlargement of wilderness areas in the region. At congressional hearings, the proposals generally were supported by recreation and wilderness groups and opposed by commercial and sportsmen's interests. All of the areas involved were already in national forests administered by the Forest Service. Also pending in Congress during the year were proposals for establishment of a Redwood National Park in California. (See also Conservation; National Parks.)

Tree Planting. Forest tree planting in 1966 covered a total of 1,281,947 acres, a slight decrease from the 1965 figure. The 1966 total included 301,225 acres planted by federal agencies, 79,960 acres by state and local government agencies, and 900,762 acres by private landowners. Of the private planting, 60% was done by forest industries and other industries, the remainder by farmers and other landowners.

International Symposium. Delegates from 43 countries met in Canberra, Australia, in April 1967, for the world's first symposium on man-made forests and their industrial uses. The symposium estimated that there are about 200 million acres of planted forests in the world. Of this total, China accounts for more than 33%, with the United States and the Soviet Union each having about 12%.

Forestry Schools and Appointments. Full professional curricula in forestry were offered by more than 40 American colleges and universities in 1967. At Yale and Duke universities, forestry work was offered only at the graduate level. Harvard University offered graduate studies in specialized fields of forestry.

Dr. Lee James, professor of forest economics, was appointed chairman of the Department of Forestry at Michigan State University in 1967. At Iowa State University, Dr. Henry H. Webster was named head of the Forestry Department, succeeding Carl H. Stoltenberg, who became dean of forestry at Oregon State University. Dr. Grant A. Harris, a member of the Department of Forestry and Range Management at Washington State University, was named chairman of the department. At Syracuse University, Dr. Edwin C. Jahn, associate dean, was appointed executive dean of the College of Forestry. Dr. Herbert O. Fleischer was named director of the Forest Products Laboratory at Madison, Wisc.

Forest Service. For the fiscal year beginning July 1, 1967, Congress appropriated $358,806,000 in regular funds for the operation of the Forest Service, a division of the U.S. Department of Agriculture. This is the largest forestry appropriation to date and represents an increase of about $20 million over the preceding year. The total included $185,618,000 for national forest protection and management, $110,000,000 for national forest roads, $41,657,000 for forest research, and $19,751,000 for federal cooperation with states and private forest owners.

The Forest Service reported a total of 151,000,000 visitor-days' use of national forest areas for recreation in 1966. The "visitor day" unit of measurement was newly adopted by federal land-managing agencies, and had no statistical correlation with earlier figures; but there was no doubt that people were visiting the national forests for recreation in ever-increasing numbers.

Forest Fires. In late August 1967, fires raged out of control over large areas in northern Idaho, Montana, Oregon, Washington, and British Columbia. More than 200,000 acres were burned. The Forest Service closed U.S. national forest lands in the region to the public during the emergency. Later in the year, brush fires did extensive damage to watersheds and residential areas in California. In Canada, more than 100 fires burned over 8,000 acres in northern Ontario in June. Near Sault Ste. Marie, Ontario, forest fires covered some 30,000 acres.

Lumber. Lumber production in the United States in 1966 was estimated by the National Forest Products Association at 36.1 billion board feet, which was below the 1965 figures of 36.9 billion.

In Canada, total lumber production in 1965 was approximately 10.04 billion board feet, of which 95% was softwood lumber.

UNITED STATES LUMBER PRODUCTION, 1965–66
(In million board feet)

Producing Regions	1965	1966
Southern pine region	6,574	6,665
Douglas fir region	9,234	8,428
Western pine region	10,251	10,442
California redwood region	1,912	1,859
Other softwoods	1,269	1,245
Total softwoods	29,240	28,639
Southern hardwoods	3,936	3,930
Appalachian hardwoods	1,438	1,329
Other hardwoods	2,281	2,230
Total hardwoods	7,655	7,489

Estimated world production of sawn wood in 1965, according to the United Nations Food and Agriculture Organization, was a record 370 million cubic meters, a modest rise over the 1965 figure. (One cubic meter equals 424 board feet.) Softwood production accounted for 79% of the total, although the output of hardwood lumber increased at a slightly faster rate. The Soviet Union and North America together accounted for about 60% of reported production.

Charles E. Randall
Forestry Information Specialist

FORMOSA. See China—*Nationalist China.*

FOUNDATIONS AND TRUSTS. See Philanthropy and names of organizations under Societies and Organizations.

FOWLER, Henry H. See biographical sketch under United States.

FRANCE

WIDE WORLD

PRESIDENT DE GAULLE, at a November news conference in Paris, explains that he once again opposes Britain's admission into the European Common Market.

FRANCE

French affairs in 1967 were marked by prosperity, some simmering discontents, restiveness in the traditional parties, and Gaullist extravagance in foreign policy. Throughout the year business and industrial modernization continued. Basic questions of social policy were aired, and President Charles de Gaulle presided over the nation as autocratically as ever. "In any event and whatever happens," he said on November 27, "it is the President of the Republic, and Head of State, who is responsible for upholding the spirit and letter of France's institutions and for orienting her policy during the period when he alone is the mandatory of the entire French people."

DOMESTIC AFFAIRS

The spectacle of a serene leader followed by a comfortable people characterized the French political scene throughout the year, as before.

Elections. The March legislative elections brought a long period of political jockeying in France to a culmination. Having failed to deprive de Gaulle of reelection in the presidential contest of 1965, the opposition in 1967 hoped to confront him with a non-Gaullist majority in the National Assembly, and thereby create a government crisis.

FRANCE • Information Highlights

Area: 211,207 square miles (547,026 sq km).

Population: 49,750,000 (March 1, 1967 est.).

Chief Cities (1962 census): Paris, the capital, 2,790,091; Marseille, 778,071; Lyon, 528,535; Nice, 292,958.

Government: *President*—Charles de Gaulle (took office for 2d 7-year term, Jan. 8, 1966); *Premier*—Georges Pompidou (appointed Nov. 28, 1962). *Parliament*—National Assembly, 486 members (party seating, March 1967: Gaullists, 245; Federation of the Democratic and Socialist Left, 116; Communists, 73; Democratic Center, 27; Moderates, 15; Left, 10); Senate, 273 members (party seating, December 1966: Socialists, 53; Independent Republicans, 51; Left Republican Rally, 47; Union for the New Republic, 39; Popular Republican Movement and Democratic Center, 38; Republican Center Group of Social and Rural Action, 18; Communists, 14; nonaligned, 13).

Religious Faiths: Roman Catholics, 82.6% of population.

Education: *Total school enrollment* (1964)—9,153,866 (primary, 5,602,303; secondary, 2,316,981; teacher-training, 36,246; technical, 743,225; higher, 455,111).

Finance (1966 est.): *Revenues*, $22,680,000,000; *expenditures*, $23,091,000,000; *public debt* (1964), $18,010,000,000; *monetary unit*, franc (4.93706 francs equal U. S.$1).

Gross National Product (1966): $101,351,000,000.

National Income (1966): $76,140,000,000; average annual income per person, $1,541.

Economic Indexes (1966): *Industrial production*, 151 (1958=100); *agricultural production* (1965), 131 (1956–57=100); *cost of living*, 136 (1958=100).

Manufacturing (metric tons, 1966): Cement, 23,436,000; crude steel, 19,584,000; wine, 5,873,000; meat, 2,287,200; sugar, 1,787,000; plastics and resins, 800,400.

Crops (metric tons, 1966): Grapes, 9,098,000 (world rank, 2d); apples, 3,161,000 (world rank, 1st); wheat, 11,297,000; potatoes, 10,988,000; barley, 8,998,000.

Minerals (metric tons, 1966): Iron ore, 55,044,000 (ranks 3d among world producers); coal, 50,340,000; salt (1965), 3,859,000; crude petroleum, 2,928,000; bauxite, 2,808,000.

Foreign Trade (1966): *Exports*, $10,884,000,000 (chief exports, 1965: nonelectrical machinery, $1,065,000,000; iron and steel, $967,000,000; textile yarn and fabrics, $717,000,000; automobiles, $494,000,000); *imports*, $11,836,000,000 (chief imports, 1965: nonelectrical machinery, $2,178,000,000; petroleum, $1,088,000,000; iron and steel, $549,000,000). *Chief trading partners* (1965): West Germany (took 19% of exports, supplied 18% of imports); Belgium-Luxembourg (took 10% of exports, supplied 8% of imports); U. S. (took 6% of exports, supplied 10% of imports).

Transportation: *Roads* (1964), 888,559 miles (1,429,958 km); *motor vehicles* (1965), 10,687,820 (automobiles, 8,777,500); *railways* (1965), 23,729 miles (38,180 km); *merchant vessels* (1965), 537 (4,989,000 gross registered tons); *national airline*, Air France; *principal airport*, Paris.

Communications (1967): *Telephones*, 6,554,441; *television stations*, 91; *television sets*, 7,196,000; *radios* (1965), 15,336,000; *newspapers* (1964), 128 (daily circulation, 11,872,000).

On Dec. 20, 1966, François Mitterrand's federation of the non-Communist left agreed with the Communist party to consult between the first and second ballots in the 2-stage spring election and to choose a common candidate in each constituency for the runoff. In January, Pierre Mendès–France's splinter Socialist Unity party joined the pact.

The threat of at least a temporary coalition of Communists and other leftists worried the Gaullists. With some 2,200 candidates in all, 487 Assembly seats to fill, and about 2,000,000 new voters, the professionals of all persuasions had much at stake.

As in 1965, the opposition forced de Gaulle to enter the campaign, although reluctantly, once it had begun. In an appeal on February 9 for a Gaullist Assembly, the president told the nation that the Fifth Republic was "at stake next month," and he denounced the opposition as "the great confusion that seeks to succeed it."

Valéry Giscard d'Estaing, the 41-year-old leader of the Independent Republican party, promised de Gaulle qualified support (his "Yes, but" prompted de Gaulle to retort, "One does not govern with 'but' "), and other politicians clung to the president's magic name without necessarily believing in Gaullist orthodoxy.

As an example of the highly personal nature of the campaign, when the Communists, at their 18th party congress in January, praised the president for his good relations with Moscow, various outraged Radicals and Socialists threatened to break the accord with the Communists.

De Gaulle's regime appeared at first glance to have a clear advantage, but, despite its self-interested use of government-controlled radio and television and its blatant wage and tax "bribes" to the electorate, it seemed to lose ground. Once again the president intervened. In a broadcast on the eve of the first ballot—in clear violation of a law that forbade electioneering after the previous midnight—de Gaulle claimed to be the bearer of "the superior, permanent and collective interest of the nation" against an "absurd and ruinous" opposition. His speech lent considerable credence to the left's contention that they were fighting "personal power."

The first balloting, on March 5, was heavy. Some 81% of those registered voted. The Gaullists (including Giscard d'Estaing's Independent Republicans) obtained 37.75% of the popular vote and took 68 of the 81 seats won outright that day. (A majority of the vote is required to win on the first ballot, 10% to compete on the second, and a plurality to win on the second.) The Communists won 22.45% of the vote; the Federation, 18.79%; the Democratic Center party, 12.79%; and the Socialist Unity party, 2.26%.

In the bargaining sessions that followed the polling the Communists withdrew from 15 contests in which their candidates led in the first round but appeared likely to lose in the second. Socialists previously scornful of the accord with the Communists welcomed the chance it offered to escape defeat. Thus, with the eclipse of the old right and the weak showing of the Democratic Center, the voters' choice was more polarized than it had been for years—Gaullist right versus non-Gaullist left.

In the second round of balloting, on March 12, the Gaullists obtained 42.99% of the vote; the Federation, 24.01%; the Communists, 21.55%; the Democratic Center, 8.86%; and the Socialist Unity party, 0.95%. The overall result was a Gaullist setback—from 269 to 245 seats, a bare Assembly majority. The Communists made the largest gain—from 41 to 73 seats. The Federation improved its standing from 91 to 116 seats. The Democratic Center lost heavily—from 56 to 27 seats, and the unaffiliated moderates and leftists obtained only 25 seats.

In widely publicized individual contests, former Premier Pierre Mendès-France was returned to the national legislature after an absence of nine years, and Jacques Soustelle, an exiled diehard opponent of Algerian independence, running in absentia, failed to gain a seat. The defeat of three cabinet ministers—Maurice Couve de Murville (foreign affairs), Pierre Messmer (armed forces), and Alexandre Sanguinetti (veterans' affairs)—was mitigated by the fact that ministers need not be members of Parliament.

The election results reflected the discontent of workers, farmers, and businessmen with de Gaulle's domestic policy. Prime Minister Georges Pompidou's Union for the New Republic, the major Gaullist party ("nothing but an echo of its chief," Mitterand said), was the principal government loser. Giscard d'Estaing's semiautonomous Independent Republican party was the principal government winner. Thus the government lost some freedom of action, especially in financial and social legislation, where the Independent Republicans look to their party leader for direction.

Despite the effectiveness of its electoral alliance, the opposition was far from truly unified. Whether the Socialists and Radicals would succeed in uniting the non-Communist left in a Social Democratic party as planned remained to be seen sometime after the end of the year, but the government of Charles de Gaulle did not anticipate a serious challenge at home before the next presidential election, in 1972—barring, of course, incapacitation of the president.

Decree Rule. On April 1, Premier Georges Pompidou and the 21 other members of the cabinet resigned in a parliamentary maneuver to permit them to take part in a vote on the Assembly speaker. In

PIERRE MENDÈS-FRANCE, the liberal intellectual economist and statesman who was premier of France in 1954 and 1955, was returned to the national legislature in 1967.

PICTORIAL PARADE

TOMATO GROWERS in southern France dumped 40 tons of tomatoes into the Durance River in July, to protest the slump in market prices.

KEYSTONE

the crucial vote the Gaullist speaker, Jacques Chaban-Delmas, narrowly defeated Socialist Gaston Deferre.

On April 6, Pompidou was reappointed premier. He immediately dropped seven colleagues from the cabinet, changed five portfolios, and added eight new men. Couve de Murville and Messmer were retained in their posts despite their defeat at the polls. Christian Foucet was given the ministry of the interior, and Alain Peyrefitte that of education.

Although dependent on both left-wing Gaullists and followers of Giscard d'Estaing for their majorities in the Assembly, de Gaulle and Pompidou resolved to make no concessions to anyone. In a test of their strength they requested special powers from Parliament to rule by decree for six months in order to enact social and economic legislation without parliamentary interference. They agreed to submit decrees for Assembly ratification by December 31.

De Gaulle had invoked such powers six times since coming to office. In justification of his request, he cited the urgency of acting on tariff elimination before the July 1, 1968 deadline set by the Common Market and to the necessity of modernizing industrial structures and grappling with unemployment.

The government's request was delivered to the Assembly on May 17, and it immediately provoked a motion to censure the government. Giscard d'Estaing wished to see Parliament's role upheld, but he was not willing to pull down the government in order to do so. And without his party's support the motion to censure failed.

The special powers were nevertheless unpopular. Edgar Pisani, minister of public works and housing, resigned in protest, and unions demonstrated en masse on May 17. But the nation as a whole was submissive, and ultimately the opposition was reduced to mouthing futile complaints. "Before, the majority was asked only to ratify," Jean Lecanuet, leader of the Democratic Center, said. "Now it is invited to abdicate."

Hard-line Gaullists suggested that the government should quit and thereby force new elections, but they were given pause by a Communist show of strength in the fall elections to the general councils. Forceful Communist electioneering had paid off against Gaullist indifference in the provinces. Moreover, by-elections for Assembly seats, held on August 27 and September 24, went against the government.

The political scene remained cloudy. Between the ambitions of Giscard d'Estaing and those of Pompidou—the assumed "dauphin"—the political future was obscure. At a Gaullist congress in Lille on November 26 the conservative Gaullists backed Pompidou in refusing concessions to the left-wing. (The Gaullist coalition was named the Union of Democrats for the Fifth Republic at that time.)

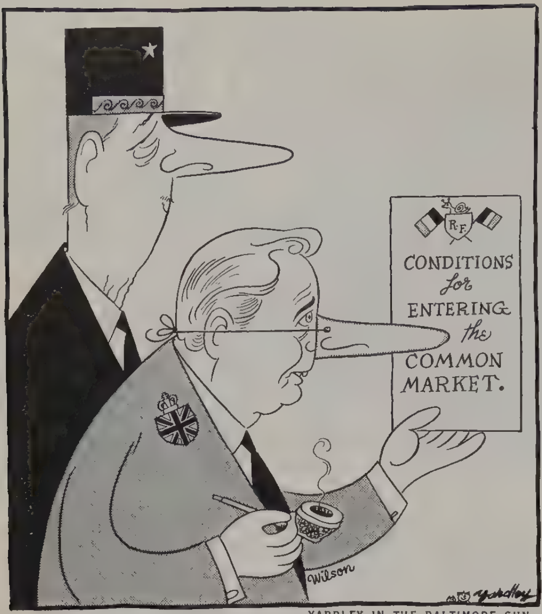
Coherence on the left was even more doubtful, and the center was in collapse. During the year the once powerful Popular Republican party vanished; one of its leaders, Maurice Schumann, was a cabinet minister and the other, Georges Bidault, was in exile. Although de Gaulle's age—77 in November—encouraged ambitions, no successor was visible.

Executive and legislature lived their separate lives, the one arbitrary, the other nearly impotent. De Gaulle's popularity declined during the summer following attacks on his "solitary exercise of power" at home and abroad. On August 10 he lashed back at his critics as "the school of national renunciation" whose "strange passion for abasement" made its adherents "apostles of decline."

Le Monde, the independent afternoon paper, warned that de Gaulle was making Frenchmen "victims of his strength of pride and obstinacy in pursuit of set ideas" and urged the opposition to "make haste to organize themselves so as to be fit for future responsibilities." But serious politics remained inert, as most Frenchmen wanted them.

Internal Security. The murky Ben Barka affair ended in June after 74 days of proceedings in two trials. Minor participants in the kidnapping and presumed murder of the Moroccan opposition leader in October 1965 received short prison terms. Four French gangsters and Gen. Mohammed Oufkir, Moroccan minister of the interior, safely in absentia, were given life imprisonment. Oufkir's aide and chief of the Moroccan security forces, Lt.-Col. Ahmed Dlimi, who had been sent by King Hassan in 1966 to stand trial, was acquitted. Others were amnestied.

Economy. Discontent with the economy was evident throughout the year. De Gaulle remarked at his May 16 press conference, "Although everyone is theoretically in favor of progress, progress never fails in practice to arouse bitterness or anxiety in many minds." But the progress he mentioned was by no means general. The chemical, automobile, and aerospace industries were strong, but business in general was not booming. Unemployment was rising; exports were lagging; tourism was in decline; steel and shipbuilding were in trouble; textiles and food


R.F.
CONDITIONS for ENTERING the COMMON MARKET.
Wilson

YARDLEY IN THE BALTIMORE SUN

"I'm Trying to See it From Your Viewpoint"

processing were weak; and, despite government encouragement, business consolidation was slow.

The market remained feeble, and the run on U. S. gold had to be abandoned. Investment capital, particularly for family-owned enterprises, was short. Slowdowns in the economies of Common Market partners reduced French export trade. Domestic market sluggishness in textiles, leather, appliances, and automobiles was blamed on the stabilization program introduced in September 1963.

Neither 1964 nor 1965 had been a good year, but 1966's industrial production had grown by 7%. The subsequent falling off in 1967 heightened discontent. The government admitted that "we must get the economy going again." Organized business claimed that "overall production is stagnant."

This situation underlay de Gaulle's request for powers to rule by decree. On May 16 he promised that he would use the authority to promote "the spirit of enterprise" in "a system of freedom" but that "we absolutely reject *'laissez-faire, laissez-passer'* and we want the Republic to direct the economic course of our country in our century." Twice rejected by the Senate, but with the opposition in the Assembly failing three times to stop it, the bill was passed on June 16.

The government's additional scheme for "participation by workers in the fruits of expansion," instituted by decree on August 17, was highly controversial. "To stick to wages alone," the president told the cabinet on July 12, "is to maintain a permanent class struggle." Only the left-wing Gaullists favored the plan for compulsory allotment of a part of company profits to workers. (The profits would be reinvested in the company—through stock purchase or mutual loan—or deposited in a mutual industrial fund.) Moreover, the workers wanted cash, and the managers wanted no part of labor meddling in their affairs. The president's hope of ending worker alienation was paralleled by leftist fears of a weakening of working-class identity and strength.

Other decree measures, announced on July 12, included additional funds in the 1968 budget for public housing, road building, and telephone expansion, and, in the private sector, tax relief, increased family allowances, and more credits for private investors in depressed areas. Balancing these stimulants to the economy were heavy transit fare increases, cuts in the social security program, and higher payroll deductions for medical services.

The master plan of Finance Minister Michel Debré was to revitalize underdeveloped areas and prepare for the dismantling of the last protectionist walls within the Common Market. On August 30 he declared that, despite the older generation's finding it "hard to face reality," France had passed "from a closed . . . to an open economy." Conservatives charged that the 1968 budget of $26.5 billion was too high. Socialists insisted it was too low. But after bitter Assembly debate, it was nevertheless approved on October 11 (only the Assembly passes on decree legislation).

In the countryside dissatisfaction was rife. Industry struck in the spring. Winegrowers in the south (supported by various bishops) demonstrated against importation of North African wine. In October riot police and hundreds of farmers were hurt in collisions. Telephone and power lines were cut in Brittany. Tear gas routed union members stoning the prefecture in Le Mans. But the president was imperturbable. "Preconceived ideas," he said on May 16, "must not obscure the general interest."

FOREIGN AFFAIRS

President de Gaulle's conduct of foreign affairs in 1967 reflected his belief that France has a central role to play in an accommodation of Europe's nation-states.

NATO. Between March 14 and 30 the North Atlantic Treaty Organization command was withdrawn from France as requested by the French government in 1966. Thus France had extricated itself, de Gaulle said, from "subjection" to "the insidious theories and the convenient practices of subordination." Pompidou told the Assembly on April 18 that the withdrawal ended a 9-year effort by France to restore its independence of policy. There was no open criticism of France's decision within the alliance. But the French journalist André François-Poncet wrote of de Gaulle's decorating the NATO commander, Gen. Lyman Lemnitzer, shortly before the final withdrawal, "A ribbon of honour on the breast does not erase the mark made by a kick in the rump."

In September, in a more cooperative spirit, the government relaxed its requirement of monthly review of permission for NATO overflights (imposed in June 1966) and granted permission on an annual basis. But observers believed that a final French withdrawal from NATO itself would come in 1968.

Common Market. By late 1967 the European Common Market nations were within sight of their goal of a tariff-free community. They agreed in the spring to integrate Euratom and the Coal and Steel Community with a combined commission under Belgium's Jean Rey as chairman (thus easing out Germany's Walter Hallstein, a critic of de Gaulle and defender of closer European political integration). The big question remained: Would Britain be permitted to join? At the close of 1967 the answer was clearly negative.

British Prime Minister Harold Wilson went to Paris on January 19–20 to discuss British entry directly with de Gaulle. No communiqué was issued, but Wilson told the House of Commons after his return that de Gaulle was "more enthusiastic about British entry than he had been at any other time."

The ambiguousness of Britain's prospects was compounded by de Gaulle's claim on May 16 that British entry "can cause nothing but satisfaction to France." De Gaulle denied ever having exercised a veto over Britain's application, but warned that Britain must transform its economic relations "fundamentally" before entering the market. Otherwise, he said, British entry would result in "a completely new structure which would virtually wipe out everything that has just been built," and lead to "a Western European free trade area, pending creation of the Atlantic area which would deprive our continent of all real personality." If, however, Britain turned fully toward Europe and accepted all the conditions of the market, he said, "how wholeheartedly France would welcome such a historic conversion!"

Although other market member-states pressed for taking up British application, de Gaulle steadily blocked serious talks. Wilson visited Paris again on June 19, but without results. At Brussels on July 10, Couve de Murville opposed his German, Belgian, and Dutch colleagues in the council of ministers, alleging that British entry would drag western Europe into the cold war and turn the market into a loose Atlantic and Pacific trading community. The commission nevertheless reported favorably on negotiating Britain's admission. No less determinedly, France refused its agreement. The French used the deepening economic and financial plight in Britain to strengthen their argument, until finally at a press conference on November 27, de Gaulle declared flatly that negotiations were "impossible."

West Germany. The regular, high-level exchange of visits to Paris and Bonn, in January and July respectively, was cordial. Chancellor Kurt Kiesinger, on his first official visit to Paris, on January 13, said that he hoped to eliminate previous "prejudices and misunderstandings" between the two nations and "cut many a Gordian knot." Expecting Kiesinger to be more independent of Washington than his predecessor, de Gaulle reaffirmed their treaty ties.

De Gaulle and Kiesinger agreed that West Germany should seek to establish normal relations with the eastern European states, and that West Germany and France should cooperate in defense, in eliminating a technological gap between western Europe and the United States, and in developing common transport, industrial, social, and taxation policies. Despite Bonn's willingness to assist British entry into the Common Market, Kiesinger repeatedly told London, "We have no pressure to exert on France."

The Bonn discussions, on July 12-13, began coolly as a result of de Gaulle's pronouncements on the Middle East crisis and his consultations with Soviet Premier Aleksei N. Kosygin in Paris on June 16 and July 1. Formal cordiality prevailed, but Kiesinger rejected de Gaulle's proposal for a European security conference excluding the United States (the idea was suggested by the Soviet Union). Establishment of a high-level interministerial Franco-German commission on defense was agreed to. After the meeting, the chancellor said of his guest, "Whether you agree with him or not, what a man!" Kiesinger's admiration may have diminished when de Gaulle, on a visit to Poland in September, repeatedly endorsed the Oder-Neisse frontier between East Germany and Poland, a line unacceptable to Bonn. Nevertheless, it was undeniable that de Gaulle wished to see a united Germany reintegrated into Europe in his own lifetime, and he had no desire, he said on November 27, "to offend our German friends."

Britain. Formally cordial relations with the United Kingdom barely masked the bitter struggle over Britain's bid for membership in the Common Market. Other Franco-British differences arose over policies in the Middle East crisis and attitudes toward U.S. involvement in Vietnam. France's withdrawal on July 5 from a January agreement to build a variable-geometry supersonic military aircraft (which would have provided the core of the Royal Air Force after 1975) increased the tensions. Nevertheless, de Gaulle insisted on November 27 on his "exceptional esteem, attachment and respect" for Britain.

Soviet Union. Relations with the Soviets remained friendly. Accords were concluded in January for increased trade, for a Franco-Soviet Chamber of Commerce with offices in Paris and Moscow, and for semiannual ministerial conferences to review industrial and scientific cooperation.

Premier Pompidou told the Assembly on April 18 that France sought "rapprochement for the greatest good of Europe and peace." On June 15, during the fierce diplomatic purging immediately following the 6-day Israeli-Arab war, Kosygin communicated with de Gaulle over the "green line" (a direct communication link established after the president's 1966 visit to Moscow) and met with him the next day in Paris. They conferred again briefly on July 1, when Kosygin returned from transatlantic travels. Pompidou's 5-day visit to the USSR on July 3-7 resulted in common declarations on the Vietnam War.

Poland. De Gaulle visited Poland from September 6 to 12. Hoping for greater cultural, technological, and scientific exchanges between the nations, he stressed historic Franco-Polish friendship and the need for an East-West reconciliation leading to "contractual settlement of the great problem of Germany." He repeatedly urged the Poles to be "in the first rank," and to "look a little further and see things in broader perspective than you have been obliged to in the past." He was careful not to suggest support for the hard-pressed Roman Catholic Church in Poland, and he was condemned by high church sources there for "lack of character."

AMERICAN FLAG is folded for the last time, March 14, at U. S. European Command military headquarters outside Paris. Headquarters was transferred to Stuttgart, Germany.

WIDE WORLD

PARIS MATCH—PICTORIAL PARADE

RUMANIAN PREMIER Gheorghe Maurer (*left*) talks with Charles de Gaulle across a desk in latter's sumptuous office in the Elysée Palace, Paris, June 28. De Gaulle maintained close contact with several East European states in 1967.

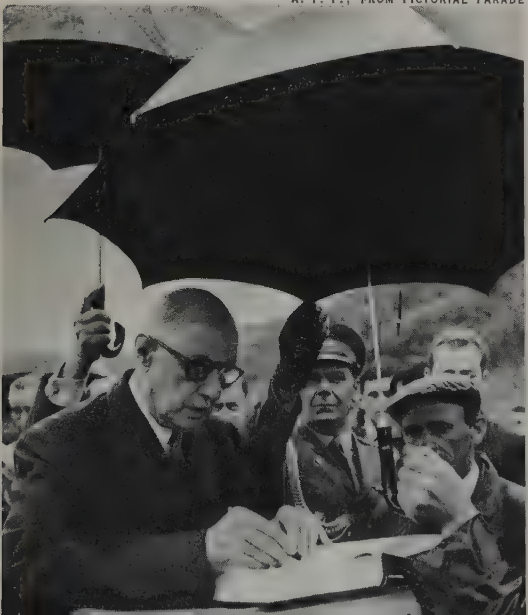
Thus de Gaulle subordinated his feelings as a Roman Catholic to the larger concerns of trying to urge Poland away from subordination to the Soviet Union. When he had concluded his address to the Polish Sejm (parliament) on September 11, however, he was formally told by Władysław Gomułka, the first secretary of the Communist party, that Poland would hew to the Soviet alliance.

On his return to Paris, de Gaulle insisted that he had merely encouraged Poland "to be herself," and that he had not asked the Poles to "renounce Soviet friendship." Nevertheless, his well-known view that nationalism is stronger than ideology and that the time may be ripe for reconciliation of East and West seemed to find no immediate response.

United States. De Gaulle's attack on the "American hegemony" in Europe was relentless in 1967. Arguing that the Soviet Union had become stable and inwardlooking, he told Chancellor Kiesinger that the principal menace to the world's peace was U. S. meddling in other nations' affairs. He condemned the "detestable war" in Vietnam.

DE GAULLE IN POLAND for a week's visit in September urged that nation toward more extensive ties with France.

A. F. P., FROM PICTORIAL PARADE



Despite his grievances, however, de Gaulle insisted to Vice President Hubert H. Humphrey in a Paris meeting on April 7 that France and the United States were friends. He refused to allow the Vietnam War Crimes Trial sponsored by Bertrand Russell and Jean-Paul Sartre to be held in France, and although some critics still thought he was close to taking the Soviet line in world affairs, he actually followed a purely French policy, based on a French conception of France and Europe and on fear of war between the Soviet and American camps.

Canada. Franco-Canadian relations were on a collision course long before President de Gaulle set foot in Quebec in 1967. His ill-starred visit from July 23 to 26 was preceded by numerous statements indicating that he was ready to encourage Quebec in its confused but determined effort to obtain a special place in the Canadian confederation. "All Frenchmen," he told Quebec's premier, Daniel Johnson, in Paris on May 22, "are profoundly convinced now of the great destiny common to them."

However, the effect of his declarations in Canada was shocking. Immediately after his arrival in Quebec City, following a rough Atlantic crossing on the cruiser *Colbert*, de Gaulle began urging the citizens of Quebec to stop playing "second fiddle," to become their "own masters," and to prevent "outsiders" from exploiting them. Along the route to Montreal, on July 24, he spoke repeatedly of "New France" and encouraged French-Canadian assertiveness.

The climax came that night in a speech from the balcony of Montreal's city hall: "Here and along the way, I have encountered an atmosphere the same as that at the Liberation." De Gaulle ended with a chant, shouting the Quebec separatist slogan, *"Vive le Québec libre!"* French-Canadian nationalists were delighted, but Canadian opinion as a whole was outraged. Prime Minister Pearson told the nation the next day that welcome as the president was, "certain" of his statements encouraged those who would "destroy Canada; and, as such they are unacceptable to the Canadian people and its government."

De Gaulle thereupon announced his departure. "It is not possible," he remarked privately on July 26, "that I should be criticized publicly, or that I should be summoned to explain myself." Until he flew home, he continued making remarks in that manner, but not without being directly admonished by Mayor Jean Drapeau of Montreal.

De Gaulle left a furious nation. Most Canadians were appalled by such unprecedented intervention by a foreign guest. "I couldn't have done otherwise," he told a member of his entourage. "I would have failed in my historical role."

At his November press conference, de Gaulle reiterated his position even more unequivocally, announced that cultural and technical assistance for the province would be increased, and predicted the establishment of a sovereign Quebec. Again, he drew the mild official Canadian reply that his statements were "intolerable," as well as the unofficial contempt of most Canadians.

"The great Quebec affair," as de Gaulle called it, interested few Frenchmen, but it was a striking demonstration of de Gaulle's bold, contemptuous design to make the voice of France heard in world affairs. (See also CANADA.)

Middle East. France's relations with Israel turned suddenly sour in 1967. Despite previous harmony and major French contributions to Israel's defenses, de Gaulle refused to support Israel in the Israeli-Arab war. He cut off all supplies to Israel, and on June 21 and again on November 27, he publicly condemned Israel for starting hostilities—the ultimate cause of which, he said, was the war "started in Vietnam through American intervention."

De Gaulle did not deny the existence of Arab provocation, but he refused to accept the excuse. "I told them: 'Don't be the first to attack.' Despite that, they did attack first. I hold it against them for having done that." The president's policy in this instance was one of seeking the leadership of nations not attached to either the Soviet or American camp. His course was far from universally popular in France, but he adhered inflexibly to it.

French Community. Despite riots in 1966 against continued French rule, the former African colony of French Somaliland voted on March 19 to remain in the French community with "increased autonomy" rather than become independent. The outcome of the vote reflected backcountry Afar support for France and opposition from the independence-minded Somalis of Djibouti, the capital. The referendum was held in almost warlike conditions, which continued unabated after the poll. French troops killed more than a dozen Somalis. Some 4,500 Somalis were arrested, and thousands of others were expelled to neighboring Somalia, which has designs on the French colony.

An attempt to assassinate Senegal's President Léopold Senghor failed on March 22. In Togo, however, President Nicolas Grunitzky was overthrown in a January coup led by the same officer who had murdered President Sylvanus Olympio four years earlier. France refused to help Grunitzky, who escaped harm.

De Gaulle stressed the theme of the "French presence" during a 10-hour visit to the North Atlantic islands of St. Pierre and Miquelon on July 20. He said the islands were "as French as can be . . . a token of our independence of everybody," and "symbols of what we French are worth in the face of an immense continent." Through them, he said "French influence is felt in Canada and the United States."

United Nations. There was no change in 1967 in the French government's view that the United Nations' peace-keeping role in the world was second to that of the great powers. Couve de Murville told the UN General Assembly on June 22 that it should discuss the Middle East crisis but not reach decisions. That, he said, "would not be its mission. If there should be action on the part of the UN, we know well that it belongs to the Security Council." On September 28, noting that the debate on the Israeli-Arab war had only revealed bitter divisions in the Assembly, he referred to the "disenchantment which today stamps the atmosphere of such discussions."

To President de Gaulle and his collaborators the vastly increased world body that the UN had become since its foundation was more a reflection of the world's troubles than an agent for ending them. (See also EUROPE.)

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FREEMAN, Orville L. See biographical sketch under UNITED STATES.

FRENCH LITERATURE

France lost one of its most distinguished and prolific authors in 1967. André Maurois, who was a member of the French Academy for 29 years, died in October at the age of 82. Maurois was most celebrated for his biographies of the great literary men of the 19th century. His masterpiece, on the life of Balzac, was written at the age of 80.

The year 1967 also marked the deaths of Marcel Aymé, a cool and witty novelist and playwright; Thyde Monnier, a realistic and lyric author of novels on Provence; and Albertine Sarrazin, who, like Jean Genet, drew upon her prison experience in her writing. Mlle. Sarrazin died at the age of 30.

Poetry. A number of particularly excellent collections of poetry were published in 1966–67. In *Courir les rues,* a humorous, erudite, and often touching book, Raymond Queneau comments on the epochs of French history recalled by the street names of Paris. René Char collected what he calls his "seasonal theater" in *Trois coups sous les arbres.* The book, which evokes dramatic forms, including ballet, contains many poems on freedom, written just after the liberation of Paris in 1944. Eugène Guillevic's *Euclidiennes* is a clever collection in which each poem treats the secret life of a geometric figure. Guillevic tells, for example, of the wretchedness of the broken line, and of the unhappy lot of the sinusoid, an intricate type of curve: "It's tiring going uphill and frightening going down."

In *D'après tout,* Jean Follain writes of the objects and persona of daily life, as well as of such "in-betweens" as statues and their reflections. In a witty and charming collection, *Le savon,* Francis Ponge writes minutely descriptive *chosist* poetry, which leads the reader from meditation on simple objects to discovery of self and creation. Gisèle Prassinos collected her poems of the past 30 years in *Les mots endormis.* The majority of the poems are dominated by Mlle. Prassinos' obsession with terror and the fantastic.

Although Yves Bonnefoy, one of the most respected of the younger French poets, did not publish a collection in 1966–67, he gathered under the title *Un rêve fait à Mantoue* various meditations comprising a fine commentary on poetry and art. In an important essay entitled *La poésie française et la principe d'identité,* Bonnefoy declares, "Poetry is not the use of language. Perhaps it is madness within language."

Fiction. There were a number of best sellers in 1966–67, but novels of high quality were rare. The literary prizes awarded at the end of 1966 did not spotlight any exceptionally talented authors.

Mention should be made, however, of Irène Montési's *Nature morte devant la fenêtre,* a haunting and frightening book about a woman who does not love her children, and of Edmonde Charles-Roux's *Oublier Palerme,* which received the Goncourt prize. In her work, Mme. Charles-Roux draws a parallel between the two civilizations she knows best, the Mediterranean and the Anglo-American. She succeeds in bestowing upon her characters, drawn from both worlds, a convincing, although pathetic, existence.

Among widely known authors who published novels during the year were Louis Aragon, whose novel *Blanche ou l'oubli* is an erratic and brilliant exercise in style and confession; Romain Gary, who wrote the caustic *La danse de Gengis Cohn;* Marguerite Duras, who brought out in novel form, under the title *L'amante anglaise,* a version of her play *Les viaducs de la Seine-et-Oise;* Christine Arnothy, who published *Jouer à l'été,* a kind of suspense novel reminiscent of Colette's *Chéri;* and Louise de Vilmorin's frothy and precious *L'heure maliciôse.*

Histoire, by Claude Simon, was the most characteristic *nouveau roman* of 1966–67, and was also one of Simon's most difficult works. *Le prénom de Dieu* was a highly original but at times baffling collection of short stories by Hélène Cixous. The stories were written in the form of a long nightmare in a universe of anguish and terror. More conventional reading was to be found in Jean Freustier's *Les collines de l'est,* a collection of well-written tales that successfully mix irony and pathos.

Nonfiction. Several important journals and collections of essays appeared during 1966–67, including *L'extase matérielle,* the essays of Jean-Marie Le Clézio; *Journal en miettes,* in which Eugène Ionesco meditates unhappily on his life and work; and *Lettrines,* essays by Julien Gracq, who comments on life, history, and literary creation. Two other important books, both influenced by structuralism, were *L'écriture et la différence,* by Jacques Derrida, and *Système de la mode,* a difficult work by the critic Roland Barthes.

Theater. Among plays by French authors who are already widely known, the most durable will probably be Françoise Sagan's *Le cheval evanoui.* However, the most original play of the year, in the opinion of many theatergoers, was Romain Weingarten's *L'été,* a poetic work in which two children and two cats follow the love-play of an unseen couple. Mention must also be made of *Comme au théâtre,* by Frédéric Renaud, and *Un jour j'ai rencontré la vérité,* an amusing parable by Félicien Marceau.

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FRIENDS, Religious Society of

The Fourth World Conference of Friends (Quakers) was held at Guilford College, near Greensboro, N. C., from July 24 to August 3, with 900 representatives from 35 nations attending. UN Secretary-General U Thant addressed the conference, denouncing the war in Vietnam and urging greater support of the United Nations. Other speakers included L. Hugh Doncaster of Birmingham, England, and Douglas V. Steere of Haverford College, Haverford, Pa. The conference approved a statement calling for a cease-fire in Vietnam, asked for a new attitude in race relations, and urged Quakers to take a new role in the sharing of world resources.

A Quaker Action Group, determined to aid victims of the war in Vietnam on both sides, sailed the *Phoenix* into the North Vietnamese harbor of Haiphong on March 28, 1967. The yacht carried $10,000 worth of medical supplies, despite the opposition of the U. S. government. Friends were not united in supporting the project in violation of the law banning the sending of such supplies to North Vietnam. When the Philadelphia Yearly Meeting decided to endorse this effort, the presiding clerk, Judge Albert B. Maris, resigned.

The American Friends Service Committee commemorated its 50th anniversary in 1967, and William D. Lotspeich was named executive secretary to succeed Colin W. Bell, who has served since 1959. A new project to provide prosthesis equipment has been started in Quang Ngai, South Vietnam, and efforts have been made to aid refugees in the Middle East following the Israeli-Arab war.

The Evangelical Friends Alliance began the joint publication of a new periodical, the *Evangelical Friend.*

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FRUITS

The orchards and vineyards of the United States were not as productive in 1967 as they had been in 1966. Citrus production was also below that of the

Table 1—U. S. PRODUCTION OF APPLES, PEACHES, AND PEARS, BY LEADING STATES
(In pounds)

	Average 1961–65	1966	Preliminary 1967
Apples[1]			
Washington	1,200,000,000	1,590,000,000	1,300,000,000
New York	923,000,000	930,000,000	935,000,000
Michigan	673,000,000	675,000,000	525,000,000
California	487,800,000	595,000,000	384,000,000
Virginia	466,500,000	207,000,000	368,000,000
Pennsylvania	460,600,000	351,000,000	359,000,000
West Virginia	237,900,000	120,600,000	211,600,000
North Carolina	128,800,000	116,000,000	165,500,000
New Jersey	121,800,000	101,500,000	122,000,000
Massachusetts	108,000,000	88,000,000	98,000,000
Oregon	104,200,000	120,000,000	129,100,000
Illinois	102,900,000	94,800,000	104,900,000
Peaches			
California			
Clingstone	1,493,600,000	1,678,000,000	1,376,000,000
Freestone	614,800,000	516,000,000	410,000,000
South Carolina	314,700,000	339,000,000	170,300,000
Georgia	196,300,000	188,500,000	148,800,000
Michigan	113,600,000	48,500,000	69,000,000
New Jersey	109,000,000	70,000,000	55,000,000
Pennsylvania	108,500,000	62,400,000	38,400,000
Washington	69,300,000	67,200,000	41,000,000
North Carolina	61,300,000	77,100,000	40,000,000
Arkansas	58,800,000	49,400,000	52,000,000
Virginia	54,600,000	29,800,000	24,500,000
Colorado	54,300,000	13,000,000	6,500,000
Pears		(In tons)	
California	301,800	365,000	117,000
Oregon	124,440	163,500	151,000
Washington	114,620	150,000	139,500
Michigan	37,440	34,700	18,000
New York	16,800	20,600	17,200
Colorado	6,024	3,500	1,500
Utah	4,176	4,000	4,500
Pennsylvania	3,076	2,750	2,600
Texas	1,976	2,500	...
Idaho	1,800	620	1,800
Connecticut	1,782	2,250	1,875

[1] Estimates of the commercial crop refer to the total production of apples in the commercial orchards of 100 or more bearing-age trees. (Source: Statistical Reporting Service, U. S. Department of Agriculture.)

previous year. Production of the 20 major fruits totaled 17,123,000 tons, compared with 22,096,000 in 1966. Grapes, followed by peaches, pears, and apples, accounted for much of the decline in production, and all major citrus crops were well below 1966 levels.

Noncitrus fruit production in 1967 was 16% below both 1966 and the 1961–65 average. Citrus production for the 1967–68 crop year indicated a decline of 30%.

Grapes. The production of grapes in 1967 declined to 3,007,000 tons, or 19% less than the 1966 crop and 17% below the 1961–65 annual average. European-type grapes, grown principally in California and Arizona, accounted for 2,700,000 tons in 1967. California's crop in 1967 included 625,000 tons of wine varieties and 1,620,000 tons of raisin varieties. Less than one half of the output of raisin varieties was made into raisins, totaling 183,000 tons (dried basis), 35% less than in 1966.

Cherries. Sour cherry production in 1967 totaled 82,950 tons, 8% below the 1966 crop and less than half the 1961–65 average. Sweet cherry production totaled 108,010 tons, 7% below 1966 but 10% above average.

Apples. The 1967 apple crop of 5,462,000,000 pounds was 5% below the 1966 crop and 8% below the 1961–65 average. The crop (in pounds) included 127,800,000 of summer varieties, 447,200,000 of fall types, and 4,886,900,000 of winter apples.

Pears. The nation's 1967 pear crop totaled 454,975 tons, or 39% less than the 1966 crop and 26% below the 1961–65 average. Nearly all the production came from California, Washington, and Oregon, which together supplied 407,500 tons.

Peaches. The production of 2,699,000,000 pounds of peaches in 1967 was 21% below 1966 production and 24% below the 1961–65 average.

Plums and Prunes. California produced 98,000 tons of plums; this was 3% above the 1966 crop but 3% below the 1961–65 average. The California prune crop totaled 150,000 tons, 14% above 1966 but 2% below average. Production of plums and prunes in other states totaled 70,000 tons, 6% above 1965, but 8% below the 5-year average.

Bushberries. Production of bushberries in Washington and Oregon in 1967 totaled 88,000,000 pounds, 11% below 1966 production but 23% above the 1961–65 annual average.

Table 2—U. S. PRODUCTION OF FROZEN FRUITS

Product	1965 (Pounds)	1966 (Pounds)
Apples	93,392,000	94,352,000
Apricots	16,369,000	16,172,000
Blackberries	23,251,000	25,821,000
Blueberries	27,981,000	35,403,000
Boysenberries	8,962,000	9,165,000
Cherries	147,846,000	90,645,000
Currants	715,000	650,000
Gooseberries	383,000	968,000
Grapes and pulp	18,117,000	6,712,000
Loganberries	1,243,000	1,750,000
Olallieberries	3,821,000	63,000
Peaches	59,453,000	65,190,000
Plums	6,091,000	5,355,000
Prunes	1,178,000	259,000
Purees, noncitrus berries	4,214,000	20,264,000
Raspberries, black	6,210,000	3,465,000
Raspberries, red	27,631,000	31,575,000
Strawberries	191,613,000	236,492,000
Other fruit	14,982,000	19,278,000
Total	653,452,000	663,570,000
Citrus juice pack[1]	1965–66 (Gallons)	1966–67 (Gallons)
Orange, concentrated	70,831,000	127,610,559
Grapefruit, concentrated	3,971,000	5,484,816
Blend, concentrated	50,000	29,099
Tangerine, concentrated[2]	715,000	1,119,869
Limeade	795,000	...

[1] Season beginning November 1. [2] Florida pack only. (Sources: fruits—National Association of Frozen Food Packers; citrus juices—Florida Canners Association.)

Table 3—U. S. CITRUS PRODUCTION BY LEADING STATES
(Number of boxes[1])

	Average 1961–65	1966	1967[2]
Oranges			
Florida	86,560,000	144,500,000	98,400,000
California	29,700,000	37,400,000	25,000,000
Arizona	2,008,000	3,910,000	3,800,000
Louisiana	59,000	[3]	[3]
Total U. S.	119,279,000	188,610,000	128,500,000
Grapefruit			
Florida	31,620,000	43,600,000	32,500,000
California	3,764,000	5,000,000	4,400,000
Arizona	2,720,000	1,680,000	3,000,000
Texas	1,814,000	5,600,000	1,800,000
Total U. S.	39,918,000	55,880,000	41,700,000
Lemons			
California	14,380,000	15,300,000	14,000,000
Arizona	1,370,000	2,810,000	3,100,000
Total U. S.	15,750,000	18,110,000	17,100,000
Tangerines			
Florida	3,420,000	5,600,000	3,500,000

[1] Approximate weight per box varies as follows: Oranges—California and Arizona, 75 pounds; and other states, 90 pounds; grapefruit—California, Desert Valleys and Arizona, 64 pounds; lemons—76 pounds; tangerines—95 pounds. [2] Season begins with the bloom of the year shown and ends with completion of harvest the following year. [3] Production too small to warrant estimate. (Source: Statistical Report Service, U. S. Department of Agriculture.)

Apricots. Production of apricots totaled 148,000 tons, 24% less than in 1966, and 26% below the 1961–65 average.

Olives. An estimated 12,000-ton olive crop in California was about one fifth the size of the 1966 crop and less than one fourth the 1961–65 average.

Figs. The 1967 fig crop of 44,600 tons (fresh basis) was one third less than both 1966 production and the 5-year average.

Avocados. Florida grew 13,600 tons of avocados, sharply above the 1966 crop and 42% more than the 1961–65 average. California's fall and winter crop was forecast at 18,000 tons, or two thirds less than the 1966–67 crop.

Cranberries. The 1967 cranberry crop dropped 11% below the 1966 record crop to 1,425,000 barrels but was 8% above the 1961–65 average.

Strawberries. The production of 478,026,000 pounds of strawberries was up from the 464,542,000 pound 1966 crop but under the 1961–65 average of 510,691,000 pounds.

Citrus Crop. Citrus production ran substantially below the 1966-67 record citrus output—one third less for oranges and tangerines; one fourth less for grapefruits; and 6% fewer lemons. The U. S. Department of Agriculture estimated the total crop at 191,700,000 boxes.

Foreign Trade. The value of exports of American fruit and fruit products decreased slightly from $327,000,000 in the 1966 fiscal year to $320,000,000 in 1967, according to the Economic Research Service.

The value of fruit and fruit preparation imports increased in fiscal year 1967 to $314,000,000 compared with $290,000,000 in the preceding year. Bananas, the largest fruit import, accounted for $133,000,000 of the 1967 total.

WILLIAM WHYTE
Office of Information, U. S. Dept. of Agriculture

FUELS. See ATOMIC ENERGY; COAL; GAS; MINING; PETROLEUM; and, for rocket and spacecraft fuels, MISSILES; SPACE EXPLORATION.

FULBRIGHT, James William. See biographical sketch under FOREIGN POLICY.

FURNESS, Betty. See biographical sketch under CONSUMER AFFAIRS.

GABON

The political power of Vice President Albert Bongo was solidified in 1967. President Léon M'ba's chosen successor, Bongo assumed the presidency on December 4 following M'ba's death in Paris, where he had been hospitalized, on November 28. The political situation was somewhat tense, but it remained controllable largely because of the French-supported army and the availability of French troops. Meanwhile, development programs were accelerated, and the economic outlook was bright.

Political Affairs. Bongo began his rise to power in mid-1966, when, though officially minister of defense, he became de facto chief executive while M'ba was ill in Paris. In a cabinet shuffle on Nov. 14, 1966, Bongo became vice president, replacing Paul-Marie Yembit, who became minister of justice. A further cabinet shuffle on Jan. 25, 1967, eliminated from the government Vincent de Paul Nyonda, a contender for political power, and Yembit was similarly purged on April 15.

On February 16 the National Assembly approved constitutional amendments making its own electoral life coterminous with the presidential and vice presidential terms and changing the vice presidency to an elective office with additional powers.

Bongo then announced that the 1967 elections would be postponed until 1968. This announcement was ill-received, and on February 26, M'ba, from Paris, declared that elections would be held as planned. He also announced that he and Bongo would be the presidential and vice presidential candidates of the ruling Gabonese Democratic Bloc. With the opposition leaders in jail and their party unrepresented in the assembly, the outcome of the March 19 election was a foregone conclusion.

Economy. Production of gold, petroleum, natural gas, and uranium concentrates showed significant increases in 1967. A new brewery was completed, and drilling continued on two new oil fields. Development projects to improve transportation and communications proceeded with assistance from France and the European Economic Community.

Edouard Bustin
Boston University

GABON • Information Highlights

Area: 103,346 square miles (267,667 sq km).
Population: 468,000 (July 1, 1966 est.).
Chief City (1964 census): Libreville, the capital, 45,909.
Government: *President*—Albert Bongo (took office Dec. 4, 1967); *Parliament*—National Assembly, 47 members (all belonging to the Gabonese Democratic Bloc).
Religious Faiths: Roman Catholic, 44% of population; tribal religions, 42%; Protestant, 8%; other, 6%.
Education: *Literacy rate* (1961), 12.4% of population aged 15 and over. *Total school enrollment* (1964)—78,863 (primary, 73,006; secondary, 4,015; teacher-training, 552; technical, 1,236; university, 54).
Finance (1967 est.): *Revenues*, $58,900,000; *expenditures*, $58,900,000; *monetary unit*, CFA franc (246.85 francs equal U. S.$1).
Gross Domestic Product (1966): $207,300,000.
National Income (1963): $152,200,000; average annual income per person, $334.
Cost of Living Index (1965): 114 (1962=100).
Manufacturing (1964): Lumber, 40,000 cubic meters.
Crops (metric tons): Cassava (1962–63), 114,000; cocoa beans (1967–68), 4,000; coffee (1965–66 est.), 2,500; rice (1964–65), 1,000.
Minerals (metric tons, 1965): Crude petroleum (1966), 1,452,000; manganese ore, 637,300; uranium oxide, 544; natural gas (1966), 1,152,000,000 cubic meters; gold, 37,133 troy ounces.
Foreign Trade (1966): *Exports*, $100,284,000 (chief exports, 1966: manganese, $30,406,000; wood, $28,410,000; petroleum, $15,731,000; uranium, $8,983,000); *imports*, $66,585,000 (chief imports, 1965: nonelectrical machinery, $11,643,750 motor vehicles, $6,674,000; alcoholic beverages, $382,950; trucks and lorries, $311,900; agricultural machinery, $307,000; petroleum products, $291,600; textile yarn and fabrics, $281,900; clothing, $276,600); *Chief trading partners* (1965): France (took 47% of exports, supplied 60% of imports); U. S. (took 18% of exports, supplied 12% of imports); West Germany (took 11% of exports, supplied 6% of imports).
Transportation: *Roads* (1965), 3,635 miles (5,849 km); *motor vehicles* (1965), 7,790 (automobiles, 5,700); *national airlines*, Air Gabon, Transgabon; *principal airport*, Libreville.
Communications: *Telephones* (1967 est.): 3,900; *television stations* (1967) 2; *television sets* (1967), 1,000; *radios* (1965), 36,000.

GAMBIA

Gambia (officially, The Gambia) took steps in 1967 toward fuller cooperation with Senegal, which adjoins it on three sides.

Foreign Relations. In January the United Nations appointed a regional association adviser to Prime Minister Sir Dauda Jawara's office to act as liaison between the governments of Gambia and Senegal.

GAMBIA • Information Highlights

ASIA
AFRICA

Area: 4,361 square miles (11,295 sq km).
Population: 336,000 (July 1, 1966, est.).
Chief City (1965 est.): Bathurst, the capital, 29,780.
Government: Governor *General*—Alhaji Farimang Singhateh (took office Feb. 9, 1966); *Prime Minister*—Sir Dauda K. Jawara (took office for 2d term, May 27, 1966). *Parliament*—House of Representatives, 32 elected members (party seating, 1966: People's Progressive party, 24; United party, 8).
Religious Faiths: Muslims, 73% of population; Roman Catholics, 2%; others, 25%.
Education: *Total school enrollment* (1964)—14,744 (primary, 11,504; secondary, 2,992; teacher-training, 146; technical, 102).
Finance (1966–67 est.): *Revenues*, $3,400,000; *expenditures*, $3,600,000; *public debt* (1964), $1,120,000; *monetary unit*, pound (0.4167 pound equals U. S.$1, as of Nov. 24, 1967).
Gross National Product (1965): $22,400,000.
Crops (metric tons): Peanuts (1966–67), 129,000; rice (1965–66), 37,000.
Foreign Trade (1966): *Exports*, $21,000,000 (chief exports, 1965: peanuts, $6,714,000; vegetable oils and fats, $4,264,400; palm kernels, $285,600; fodder, $78,400); *imports*, $20,100,000 (chief imports, 1965: cotton fabrics, $2,819,600; nonelectrical machinery, $1,271,200; rice, $963,200). *Chief trading partners* (1965): Britain (took 50% of exports, supplied 42% of imports); Italy (took 20% of exports, supplied 6% of imports); Japan (supplied 16% of imports).
Transportation: *Roads* (1965), 845 miles (1,360 km); *motor vehicles* (1965), 2,100 (automobiles, 800); *principal airport*, Yundum Airport.
Communications: *Telephones* (1965): 1,189; *radios* (1963), 30,000; *newspapers* (1959), 1 (daily circulation, 1,500).

The foreign minister of Senegal visited Gambia in March, and President Leópold Senghor of Senegal paid a 3-day state visit in April. At the conclusion of Senghor's stay he signed a treaty of association with Prime Minister Jawara, which called for annual meetings of the heads of state of Gambia and Senegal and established an interstate ministerial committee with a permanent secretariat. The purpose of the treaty was to further coordination and cooperation between the two countries. Despite these examples of apparent cooperation, however, real integration of services still remained a distant possibility.

Political Affairs. The major political party of Gambia is the People's Progressive party, headed by Prime Minister Jawara. The United party, led by P. S. N'Jie, provides the chief opposition.

In April 1967, Prime Minister Jawara rejected a proposal that the Field Force Division of Gambia's police force be converted into a military unit. He asserted that the country did not need to maintain a military force.

Economic Affairs and Foreign Aid. Gambia's peanut crop reached a record 129,000 tons in 1967. This enabled the government to dispense with a British budgetary grant-in-aid for the first time since 1962. Details of British financial commitments were announced in April. These included a £3,200,000 interest-free loan and yearly grants, if necessary. The grants would begin at £590,000 in 1967–68 and decline to £280,000 in 1970–71 to keep the budget balanced.

Gambia's improved financial position will allow the government to complete the projects previously outlined in a 5-year plan. Tourist trade was improving, and construction work began on the runways that will enable Yundum Airport to accommodate international flights.

Harry A. Gailey, Jr.
San Jose State College

GANDHI, Indira

Prime minister of India: b. Allahabad, India, Nov. 19, 1917.

Mrs. Gandhi's political fortunes and standing seemed to improve considerably in 1967, after a shaky start during her first year as prime minister in 1966. Her party, however, was seriously weakened by electoral reverses.

Domestic Affairs. Mrs. Gandhi was a central figure in three important political occurrences during the first half of 1967. These were the fourth general elections, which were held in February; the contest for the succession to the office of prime minister; and the election of the president of India.

Although Mrs. Gandhi won reelection to the Lok Sabha from a constituency in Uttar Pradesh—Rae Bareli—by a majority of more than 90,000 votes, her party suffered reverses in most parts of the country.

Before the new Parliament convened in mid-March, a struggle for succession to the prime ministership developed within the top ranks of the Congress party. Mrs. Gandhi emerged victorious when her rival for the office, Morarji Desai, was persuaded to settle for the posts of deputy prime minister and finance minister.

Mrs. Gandhi was also instrumental in the selection of a successor to 79-year-old Sarvepalli Radhakrishnan, president of India, whose term of office expired in May. She wished to nominate Dr. Zakir Husain, the vice president, but an influential group within the Congress party, headed by its president, Kumaraswami Kamaraj wanted Radhakrishnan to continue. The selection of Husain was regarded as a significant victory for Mrs. Gandhi. The victory was heightened in December with the announcement that Mr. Kamaraj would be succeeded in his post as president of the Congress party by Siddhavanahelli Nijalingappa.

In 1967 there was a change for the better in many areas of domestic activity. Fewer outbreaks of domestic violence occurred, and after the first good monsoon rains in three years the food situation and the economic picture improved perceptibly.

The language issue—which language or languages would be official in India—continued to cause controversy. Mrs. Gandhi spoke in favor of "indefinite trilingualism" (Hindi and English as national languages, plus a regional language in each state). In September, when Foreign Minister Mohammed Ali Currim Chagla resigned on the language issue, she temporarily took over his post. She also assumed the portfolio of planning when the Planning Commission was reconstituted in the same month.

Foreign Policy. Jan. 10, 1967, was the first anniversary of the signing of the Tashkent Declaration, in which India and Pakistan agreed to settle all disputes by peaceful means. On that day Mrs. Gandhi made a nationwide radio broadcast in which she reaffirmed India's commitment to peace and expressed hope for cooperation between India and Pakistan. In the Middle East crisis of May and June she supported the Arabs, a position which was widely criticized in India and in many foreign countries. In September she made a state visit to Ceylon, and in October to Poland, Yugoslavia, Bulgaria, and Rumania, with brief stopovers in Moscow and the U.A.R.

Background. Mrs. Gandhi is the only daughter of the late Prime Minister Jawaharlal Nehru. She attended Visva-Bharati University in Santiniketan and Somerville College, Oxford, where she studied history. In 1942, against her father's wishes, she married Feroze Gandhi, a Parsi lawyer. After Nehru was appointed interim prime minister in 1946, she became her father's hostess and constant companion.

Although she joined the Congress party as early as 1938, she did not hold office in it until 1955, when she became a member of two important committees. In 1959–60 she served as president of the party. In 1964 she became minister of information and broadcasting in the cabinet headed by Lal Bahadur Shastri. On Jan. 24, 1966, shortly after Shastri's death, at Tashkent, she was sworn in as prime minister of India.

(See also India.)

Norman D. Palmer
University of Pennsylvania

GARDENING AND HORTICULTURE

"Flower power"—the rallying cry of the hippies—also seemed to be motivating their elders, who joined the ranks of home gardeners and community landscape groups in growing numbers during 1967. Especially apparent was an increasing interest in landscaping public areas.

Public Landscaping. A rapidly increasing need for outdoor recreational areas has made the federal government the largest single employer of landscape architects in the nation. Studies indicate that 90% of all Americans participate in some form of outdoor recreation. This has led to new interest in adding to and improving the recreational utility of national forests and parks. The same trend is apparent on the local level, as is indicated by the increase in county parks from 1,000 in 1960 to 4,500 in 1967.

The growing park industry is a spur to technical developments related to large-scale landscaping. New mechanical devices being adopted across the country include mowers designed for steep slopes along expressways, machines to collect litter, flexible herbicide applicators, and mechanical root pruners for use in nurseries.

Large cities showed evidence of an increasing appreciation of the place of plants in the urban environment. Los Angeles in 1967 adopted the coral tree as the official tree of the city. This genus (*Erythrina*), with its brilliant red-orange blossoms, has the advantage of being tolerant of city smog. Several species from tropical and subtropical areas of the world are adapted to public and private landscaping in coastal areas of southern California.

Fruit and Vegetable Industry. The trend toward mechanization of the fruit- and vegetable-growing industries advanced steadily in response to rising labor costs throughout the nation. Nearly all processed tomatoes were harvested mechanically in 1967, and many kinds of nuts and fruits were also being successfully harvested by machines. Some strawberry and sweet corn growers were using mechanical harvesters for the first time.

Citrus fruit is perhaps the most difficult kind of crop to harvest mechanically, but progress was being made, particularly in California and Florida. The tremendous capital outlay needed for machinery was the most important factor pushing the fruit- and vegetable-growing industries toward corporation systems. (See also AGRICULTURE.)

Sod Growing. The great demand for well-developed sod for home lawns, industrial developments, public parks, and other sites has led to technological advances in producing and installing sod turf. These improvements have made sodding the quickest and most efficient way to establish turf areas of Bermuda grass, bluegrass, bent grass, or dichondra. The sod is expertly developed in the growing nursery, where precise irrigation, fertilizing, and weed control are scientifically programmed. When installations must be made in hot weather, sod is often refrigerated before being delivered to the site.

Horticultural Chemicals. Among the most dramatic new developments in chemicals for horticultural use are the growth regulators. Alar, a retardant of vegetative growth, can bring about fruiting of young apple trees in four years instead of the usual seven. It also reduces pruning costs, helps overcome biennial bearing, delays fruit maturity, and retards preharvest fruit dropping. The trees produce firmer fruits, which retain their fresh flavor and texture longer after picking. Alar also increases the amount of fruit when used on seedless grapes, and produces more uniform ripening of tomatoes, an important consideration in mechanized harvesting.

New chemicals available for weed control include Parquat for annual weeds and grasses and to kill perennial weeds around the base of nonbearing fruit and nut trees. Terbacil or Sinbar can be used for control of annual or perennial weeds, including quack grass, in orchards established at least three years. Ramrod is used for pre-emergence application to control annual grasses in sweet corn planting.

Other new chemical products are being used for purposes other than weed killing. Ascorbic and iodoacetic acids sprayed on citrus and olive trees near harvest time make the mature fruit come off the tree more easily, an important factor in mechanical harvesting. Chemical side pruning of chrysanthemum buds is done by some growers with fatty acid sprays.

All-American Selections. Three new rose varieties were named All-American selections for 1968. They are Miss All-American Beauty, a hybrid tea of a deep pink, with fragrant double blooms; Europeana, a deep red floribunda that flowers all summer long; and Scarlet Knight, a red grandiflora with blossoms as large as 5 inches (12.7 centimeters) across.

All America gladiolus winners for 1968 are Royalty, Purity, and Bluebird. Their colors are, respectively, red, white, and blue.

Silver medals were awarded to three new flower varieties by the 1968 All-America judges. Winners of the coveted medals were two hybrid geraniums,

GERMAIN'S INC.

NEW FLOWER VARIETIES include the Los Angeles Beautiful (*left*), official rose of the city, and First Lady (*below*), a bright yellow marigold All-America selection.

ALL-AMERICA SELECTION

PALEY PARK, a restful spot in mid-Manhattan, is an example of a small, well-planned city park. It includes a cascading waterfall-fountain, small hardy trees, and vines.

WILLIAM S. PALEY FOUNDATION, INC.

Carefree Scarlet and Carefree Deep Salmon, and the hybrid zinnia Wild Cherry.

Bronze medals went to the hybrid geranium Carefree Bright Pink, and the *Celosia plumosa* Golden Triumph. Other flower selections were the hybrid marigold First Lady; another hybrid marigold, Orange Jubilee; and the verbena Blaze.

The 1968 All-America vegetable selection was the hybrid cucumber Spartan Valor, a vigorous producer that is also disease-resistant.

An All-America special award for horticultural achievement went to Pennsylvania State University for the geranium Nittany Lion Red, the first geranium to grow true from seed. It was produced at Pennsylvania State University.

New Books. New publications of interest to gardeners and horticulturalists include *The Pictorial Encyclopedia of Plants and Flowers,* by F. A. Novak, and *Modern American Gardens Designed by James Rose,* with a text by Marc Snow. Specialized subjects are covered in *The Magic World of Roses,* by Matthew Bassity; *Fantastic Trees,* by Edwin Menninger; and *Greenhouse: Place of Magic,* by Charles Potter. *Oranges,* by John McPhee, originally published in *The New Yorker* magazine, is a kind of travelogue through the commercial orange groves of Florida. *Desert Gardening,* a Sunset book, is especially useful for home landscaping in the Southwest.

LELAND BURKHART
University of Arizona

GARDNER, John W. See biographical sketch under UNITED STATES.

GAS

Net production of natural gas in the United States reached a new record level of 17.5 trillion cubic feet in 1966, up 9.4% from 1965. Proved recoverable reserves of natural gas totaled 289.3 trillion cubic feet in 1966, an increase of 1.8 trillion cubic feet over the 1965 figure. Natural gas supplied 30.1% of the U. S. energy requirements in 1966.

Consumption. The gas utility and pipeline industry in the United States was serving 38,891,000 customers at the end of 1966. There were 35,723,000 residential gas utility customers, including 27,800,000 who were heating their homes with gas, 2,950,000 commercial gas customers, and 218,000 industrial and other users. Consumption in 1966 by class of consumer was (in trillions of cubic feet): residential, 4.1; commercial, 1.6; electric utilities, 2.6; field use, 1.8; petroleum refineries, 0.9; and other industrial users, 6.1.

Construction and Storage. Construction expenditures during 1966 set a new record of $2.4 billion. This outlay increased the gas utility and pipeline industry's plant value to a high of $31.2 billion, making it the nation's sixth-largest industry in terms of plant investment. In 1966 more than 32,000 miles of pipelines and mains were added to the nation's network that carries gas from wells to consumers; by the end of the year, there were 800,040 miles of pipelines in service.

There were 303 underground storage pools in 25 states in 1966. These storage pools, which have an estimated capacity of 4.4 trillion cubic feet, are located near consumer markets to enable gas companies to meet peak winter heating demands.

Uses. Shipments of major gas appliances during 1966 included 2,160,000 gas ranges, 2,636,000 automatic water heaters, 764,000 clothes driers, and 1,354,000 central heating units. Sales of gas central air-conditioning units in 1966 totaled 42,780, bringing the total in use to 202,860. At the end of 1966, gas utility lines were supplying fuel for 1,550,000 million gaslights, more than the total in use in the heyday of gas lighting in the 1890's.

Research. Under the American Gas Association research program, major efforts were being made to develop synthetic gas from coal, develop home climate controls, and improve gas air-conditioning and gas range equipment.

Gas Production and Consumption in Canada. Net production of natural gas in Canada in 1966 reached a record level of 1.1 trillion cubic feet. Proved re-

MAJOR PRODUCERS OF NATURAL GAS
(Marketed production in billions of cubic feet[1])

Country	1963	1964	1965	1966
Algeria	14.72	29.99	65.04	76.85
Argentina	125.56	139.99[2]	N.A.	N.A.
Austria	63.41	65.83	65.83	69.92
Brazil	17.76	18.79	24.14	29.43
Canada	1,117.43	1,363.81	1,324.15	1,430.07
Chile[3]	192.40	235.17	231.93	248.30
France	195.01	189.62	190.37	192.12
Germany, West	34.15	54.37	82.88	105.06
Iran	108.51	122.49	123.68	N.A.
Italy	271.23	286.79	291.19	328.26
Kuwait	53.54	59.22	61.55	98.00
Japan[3]	63.24	69.37	43.92	68.17
Mexico[3]	424.37	485.04	493.15	529.13
Netherlands	22.24	31.64	44.52	124.61
Nigeria	1.41	2.01	N.A.	102.68
Pakistan	49.46	59.10	67.00	N.A.
Rumania	376.97	426.07	480.18	525.43
United States	14,746.66	15,546.59	16,039.75	17,116.79
USSR	3,414.78	4,051.68	4,814.28	5,392.89
Venezuela	230.19	250.90	264.00	278.93

[1] Excluding gas used for repressuring, as well as gas flared, vented, or otherwise wasted. [2] Including gas for repressuring and gas wasted. [3] Estimate. N.A. means not available. (Source: U.S. Bureau of Mines.)

coverable reserves of natural gas in Canada totaled 43.5 trillion cubic feet at the end of the year. Natural gas supplied nearly 19% of the total annual energy requirements of Canada in 1965.

The gas utility and pipeline industry in Canada was serving 1,627,000 customers at the end of 1966. There were 1,477,000 residential gas customers, 139,000 commercial gas customers, and 110,000 industrial users.

See also MINING—*Mining Research.*

THEODORE I. GRADIN
American Gas Association, Inc.

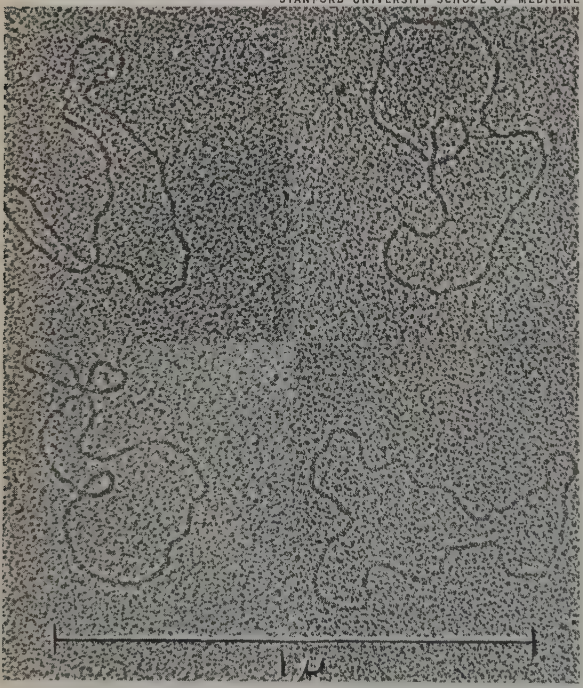
GENETICS

Major advances occurred in two basic fields of genetics in 1967. In the area of developmental genetics, the preparation of hybrid mice with cells containing two different sets of genes represented a novel experimental approach to the study of cell differentiation and tissue organization. In the field of biochemical genetics, scientists isolated two genetic repressors (substances that regulate gene activity). This success opens the way for an understanding of the molecular mechanism underlying the regulation of gene action. Another achievement was the *in vitro* synthesis of biologically active viral DNA.

Hybrid Mice. During the normal development of an embryo, cells become differentiated according to function and group together into tissues and organs. All of the body cells, however, remain identical in their genetic make-up (genotype). In experiments with mice, Beatrice Mintz of the Institute for Cancer Research in Philadelphia prepared hybrid mice with two genotypes by combining the cells of two eggs early in their embryonic development and then implanting the mass in the uterus of another female. In many instances, these "incubator" mothers gave birth to mice containing cells of both donors' genotypes. These mice are known as allophenic mice.

SYNTHESIZED DNA MOLECULES, as seen through an electron microscope, measure less than one micron in length. One micron (scale at bottom) equals 1/25,000 of an inch.

STANFORD UNIVERSITY SCHOOL OF MEDICINE



When allophenic mice are prepared from donors differing in pigmentation (for example, black and albino) they all have a standard color pattern—transverse stripes down the head, body, and tail. Through detailed analyses of the color distribution of many of these animals, it was found that each one has 34 areas of pigmentation, each derived from a single cell that differentiated early in embryonic development. These mice thus provided the first example of a vertebrate cell whose complete history of differentiation and development can be traced.

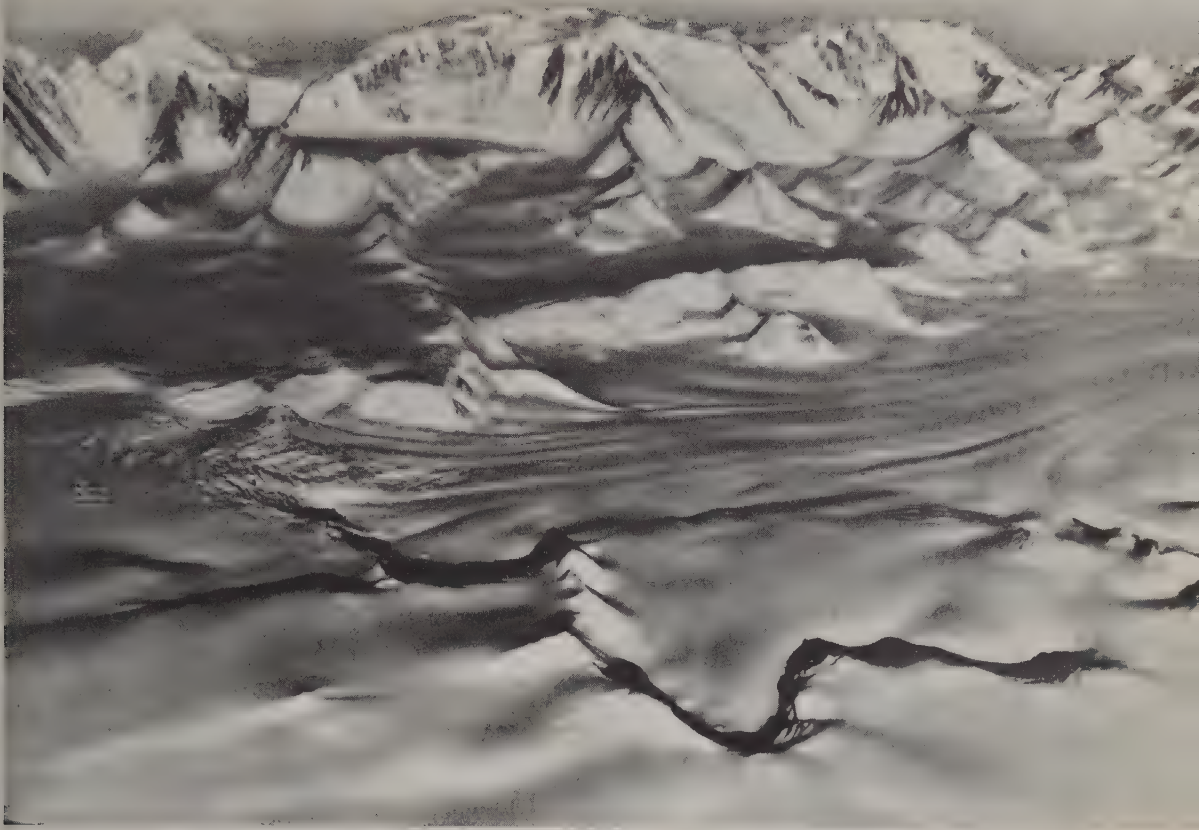
Allophenic mice were also used to study the development of skeletal muscle cells. These cells have many nuclei, and for years scientists wondered if these cells arise from the fusion of many single-nucleated cells or if they develop through the repeated nuclear divisions of a single cell. In an experiment with allophenic mice, the mice were prepared from donors that produce chemically different forms of an enzyme synthesized by skeletal muscle cells. The resulting mice were found to produce a chemically hybrid form of the enzyme, showing that each skeletal muscle cell contained nuclei of both donor mice. Such cells may have arisen from the fusion of many single-nucleated cells but could not have arisen by the repeated division of one cell's nucleus.

Gene Repressors. A few years ago François Jacob and Jacques Monod formulated a model for the regulation of gene action. According to this model, the first biochemical step—the synthesis of messenger RNA along a molecule of DNA—can be prevented by the presence of a cellular component called a repressor. For some genes, the action of the repressor can be neutralized by another substance called an inducer. Support for this model was based largely on genetic and physiological experiments with bacterial viruses, and these experiments also suggested that repressors are protein molecules.

In 1966 and 1967, the repressors of two groups of two groups of genes were successfully isolated and shown definitely to be proteins. Walter Gilbert and Benno Müller-Hill, working at Harvard University, isolated the repressor of the genes determining the fermentation of lactose in the bacterium *Escherichia coli.* Also at Harvard, Mark Ptashne used a different method to isolate a repressor of the bacterial virus *lambda.* In both systems, it was shown that the repressor acts by binding directly to the DNA of the genes whose function it regulates.

Gene Synthesis. The enzyme DNA polymerase, which is responsible for copying linear DNA strands, has been studied intensively for over 10 years. In 1967 scientists isolated an enzyme that joins the opposite ends of linear DNA molecules to form circles. Arthur Kornberg and Mehran Goulian of Stanford University, with Robert Sinsheimer of the California Institute of Technology, used this enzyme plus DNA polymerase to replicate the infectious single-stranded DNA of a bacterial virus. This experiment offers rigorous proof that the accurate copying of genes is achieved by these enzyme systems and it opens the way for the preparation of chemically modified forms of viral DNA, including that of the cancer-producing polyoma virus.

FRANK ROTHMAN
Brown University



WIDE WORLD

HIGHEST MOUNTAIN in Antarctica, the 16,860-foot Vinson Massif, was first scaled in December 1966 by a U. S. team.

GEOGRAPHY AND EXPLORATION

The parade of former colonies moving from dependence to independence lost momentum in 1967. The former British colony of Aden and the Federation of South Arabia became the People's Republic of South Yemen on November 30—the only state to win full sovereignty in 1967. Five British possessions in the Caribbean achieved associate statehood, however, under the aegis of the United Kingdom. These territories were Antigua, Dominica, St. Lucia, Grenada, and the neighboring isles of St. Kitts, Nevis, and Anguilla. Anguilla attempted to secede from the Associated State of St. Kitts-Nevis-Anguilla, and its future status remained uncertain. Another British possession in the Caribbean—St. Vincent—was expected to achieve associate statehood but showed interest in joining Guyana, which had become an independent state in 1966.

Each associate state is individually linked with Britain. Though referred to collectively as the West Indies Associated States, they do not comprise a political entity.

Map Changes. The French territory of French Somaliland, in Africa on the Gulf of Aden between Ethiopia and Somalia, changed its name to the French Territory of Afars and Issas. The Afars, in the north, and the Issas, a clan of the Dir Somalis who reside in the south, are the principal peoples of the country. The territory has 8,500 square miles (22,000 sq km) and a population of 108,000.

Canada's colorful gold rush town of Yellowknife was designated capital of the Northwest Territories, which was formerly governed from Ottawa. Yellowknife's population is 3,800.

Space Age Geography. Many geographers were making preparations for the launching of the earth resources satellite by the National Aeronautics and Space Administration in 1969 or 1970. The satellite will be packed with remote-sensing devices (radar, infrared, and photographic) that will transmit back data relating to crops, forests, water, and weather.

Present photographs from space can show more than 6,000 square miles (15,500 sq km) of the earth's surface in useful detail. Such vast coverage, combined with the speed of camera-equipped satellites, may permit man to keep a running inventory of potential water resources in the form of snow. Space photographs can also provide a rough check of hydrographic charts, help locate unmapped shoals, and detect sudden changes in underwater topography—such as new deepwater channels that are cut rapidly by hurricanes.

Antarctic Exploration. Wernher von Braun and other prominent space experts visited McMurdo Sound to see how the area might be used to test the vehicles, life-detection equipment, and instruments now being developed for lunar and planetary exploration. The scientists inspected five dry valleys at the edge of the Transantarctic Mountains, about 50 miles (80 km) from McMurdo Sound.

These mysterious, ice-free valleys are regarded as a natural training ground for astronauts. Some geologists think the valleys were formed by volcanic activity; others believe that hard bedrock shifted millions of years ago and formed dams that kept glaciers from flowing. Still other scientists suggest that the ice-free state of the valleys is caused by the earth's temperature—that if man dug deeply into the earth in this area of Antarctica, he would find

UPI

DRILLING THROUGH ICE, Canadian scientists in a 1967 Arctic expedition prepare to make probes of the ocean floor.

the temperature there increasing more rapidly than anywhere else in the world.

The U. S. Geological Survey charted a 2,700-mile (4,300-km) stretch along the coast of Byrd Land, from Edward VII Peninsula near Little America to the Jones Mountains in Ellsworth Land. This land is so flat in some places that surveyors could make sightings for 10 miles (16 km) merely by mounting their theodolites and electronic equipment on 20-foot-high (6-meters) aluminum poles. As a part of the U. S. mapping program, the Navy made aerial photographs of more than 400,000 square miles (1,036,000 sq km).

American glaciologists initiated a project to obtain samples of 30,000-year-old Antarctic ice Using knowledge gained from boring down into the Greenland icecap, the scientists set up and tested a deep-core drill designed to pierce an 8,700-foot (2,650-meter) hole at Byrd Station. They hope the ice samples will show temperature variations over the millennia; rate of snow accumulation; deposits of extraterrestrial material, if any; and physical conditions of ice and rock at the bottom of the shaft.

The U. S. South Pole Station was reported sliding away from the pole at a speed of about 150 feet (46 meters) per year and, at the same time, sinking slowly into the ice. The sinking may be caused by increased polar gravitation—up about 1/10,000 of 1% in nine years.

Fifteen Antarctic areas have been set aside as "Specially Protected Areas" for Antarctic flora and fauna upon the recommendation of a special committee established to set conservation criteria.

Robert C. Murphy of the American Museum of Natural History suggested that Antarctica be made an international park. He said the continent's balance of nature can be disturbed by many outside influences—for instance, pet dogs that kill birds, oily bilge water from ships standing offshore, and scientists who collect more specimens than needed. (See also ANTARCTICA.)

Arctic Exploration. American and Soviet scientists continued to study the icy currents of the Arctic Ocean, which flow clockwise around the North Pole.

U. S. Army scientists at Camp Century, Greenland, more than 100 miles (160 km) inland from Thule Air Force Base, analyzed nearly 10,000 years of Arctic history from a 5,000-foot (1,525-meter) core sample obtained by drilling through the icecap. Special attention was given to the composition of the ice, contents of its salt nuclei, and evidence of volcanic eruptions.

The Camp Century team has already determined that cosmic dust now is settling on the surface of the

MAKING CAMP on a frozen ocean, Canadian Arctic explorers set up a lightly framed hut on the ice.

UPI

earth three times faster than 700 years ago. (See also Arctic Regions.)

Oceanographic Exploration. The U. S. Coast and Geodetic Survey tested a small, unmanned, remote-control "drone" boat. Drones eventually will be capable of radioing to a control ship up to 15 miles (24 km) away such information as its position, water depth there, air and water temperatures, and reports on undersea rock and mineral formations.

The tiny drones promise to be an invaluable aid in oceanographic exploration. A control ship will be able to handle more drones than manned survey boats, since the 4-man boats now used must return to their mother ship at night. The data gathered round-the-clock by drones could be combined with other information to give a more precise picture than is now possible of sea floors and their oil and mineral deposits.

The U. S. Navy reported it has been tracking a "false bottom," or "deep scattering layer," in the Arctic Ocean. By day the mystifying false bottom hovers about 1,800 feet (550 meters) below sea level, but goes deeper at night. Marine biologists believe that the layer is a densely concentrated form of life, as is the case with other false bottoms that have been found elsewhere.

American Geographical Society. The society announced two major institutional changes late in 1966: Shannon McCune, former president of the University of Vermont, succeeded Charles B. Hitchcock as director, and Serge A. Korff, professor of physics at New York University, succeeded Walter A. Wood as president.

National Geographic Society. Major changes in the society's executive structure were announced in August 1967. Melville Bell Grosvenor, who had held the dual office of president and editor since 1957, assumed the newly created post of editor-in-chief. He also became chairman of the board of trustees. Melvin M. Payne, executive vice president and secretary, succeeded Grosvenor as the 12th president of the 79-year-old society. Frederick G. Vosburgh, a vice president and associate editor, was elected editor of *National Geographic,* the society's magazine.

The American Antarctic Mountaineering Expeditions, partially sponsored by the National Geographic Society, achieved the first conquest of Antarctica's highest mountains in December 1966. A 10-man team, led by Nicholas B. Clinch, made historic first ascents of six peaks in the frozen, wind-raked Sentinel Range; 16,860-foot (5,139-meter) Vinson Massif, the highest; 16,290-foot (4,965-meter) Mt. Tyree; Mounts Shinn and Gardner, more than 15,000 feet (4,572 meters) high; and Mounts Ostenso and Long Gables, more than 13,000 feet (3,962 meters) high.

The discovery in Africa of the world's first white gorilla—a 2-year-old male albino with white hair, pink skin, and blue eyes—was announced by Arthur J. Riopelle, director of a society-supported study of lowland gorillas in Río Muni.

Publications. The American Geographical Society published Folio 14 of the *Serial Atlas of the Marine Environment* in 1967. The *Atlas,* begun in 1962, is issued as a continuing series of separate studies of biological, physical, chemical, and geological aspects of the sea. Folio 14, containing information published for the first time, is a definitive study of the breeding sites and oceanic ranges of 35 deep-sea birds of the North Atlantic. The author is Robert Cushman Murphy, Lamont curator of birds, emeritus, of the American Museum of Natural History. The society also published *The Pacific Basin: A History of its Geographical Exploration,* edited by Herman R. Friis of the National Archives in Washington, D. C.

The National Geographic Society's Special Publications Division, which was created in 1965, issued four new books in 1967: *Exploring Canada From Sea to Sea; World Beneath the Sea; The Revolutionary War: America's Fight for Freedom;* and *Isles of the South Pacific.*

The National Geographic Society's Book Service published three books in 1967: a revised edition of *Wild Animals of North America; Everyday Life in Bible Times;* and a revised edition of *America's Historylands.*

The Association of American Geographers published two books in 1967: *New Approaches in Introductory College Geography Courses* and *Introductory Geography, Viewpoints and Themes.*

Conferences. The annual meeting of the Association of American Geographers (AAG), held at St. Louis in April, brought together 1,500 professional geographers, the largest attendance in the association's history. The AAG scheduled its 1968 meeting for August 18–22 in Washington, D. C. The association launched a two-year study of communications in the field of geography, to be headed by William Garvey, director of Johns Hopkins University's Center for Scientific Communication.

The Congress of the International Geographical Union announced that its next quadrennial meeting will be held in New Delhi on Dec. 1–8, 1968.

National Geographic Society

GEOLOGY

Rapid strides were made in 1967 toward solving the long-standing problem of continental drift, the theory that the continents have drifted apart from one another. The possible site of the so-called "lost continent" of Atlantis was identified, and fossils of what may be the most ancient animals known were discovered. Scientists determined the composition of an area of the moon's surface.

Continental Drift. Two discoveries made in 1967——one pertaining to coastal similarities and the other to the mechanism of drift—strongly imply that one or two former large land masses broke up and dispersed to form the present continents.

Coastal Similarities. Because of the obvious parallelism of the opposite coasts of West Africa and northern Brazil, these regions were tested to determine the actual degree of correlation of their geologic structure, age, and rock types. Over 150 widely scattered analyses were made. They showed that rocks of the same age, disposed in two corresponding belts and separated by a sharp boundary, coincide when the two coasts are "fitted together."

A survey is similarly being conducted of the submerged coastline of southern and western Australia by scientists of Australia and the United States. Information thus acquired will be compared with data from Antarctica and India to determine how these areas may once have fitted together. Laboratory ships equipped with newly developed sounding and mapping devices, used in conjunction with satellite navigation techniques, will greatly facilitate these oceanographic studies.

Mechanism of Drift. In spite of such evidence, the lack of a sufficient operating mechanism has been a

NASA

SURVEYOR 5 photograph (*top*) shows lunar surface resembling loose earth thrown up by a prairie dog (*bottom*).

serious obstacle to general acceptance of the idea of drift. However, objections seem largely to have been met by the concept that the ocean floor is spreading as a result of convection currents in the earth's mantle. Strong evidence for the existence and effectiveness of such currents is growing.

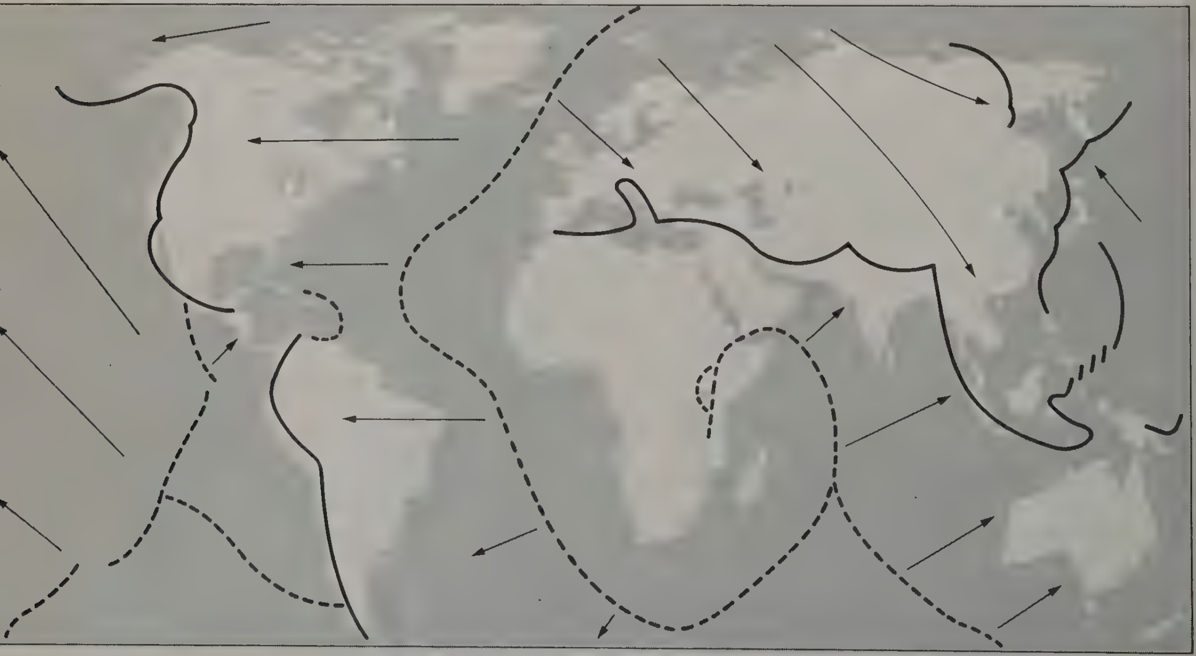
The chief links in the process are as follows. First, molten rock emerges along mid-ocean ridges after having been brought to the earth's surface by deep-seated, heat-generated convection currents in the mantle. Next, the emergent material spreads laterally from the mid-ocean ridges and is carried away in broad symmetrical bands. Concurrently, the magnetic history of the earth is "frozen" into, and carried outward from, the mid-ocean ridges by the successive bands of igneous rock as these bands of rock solidify.

In this manner, variations of magnetic intensity and, more significantly, distinct polarity reversals of the material in the rocks are recorded. The latter feature arises from sudden (and as yet unexplained) reversals of the earth's magnetic poles. Such "polarity epochs" are known to persist for varying but long periods; the last reversal took place 700,000 years ago. The really significant finding is that the bands of magnetic anomalies are preserved on both sides of the ridges in both the Atlantic and Pacific oceans. Furthermore, the rate of spreading—on the average, about 2 cm, or less than 1 inch, per year—is exactly that needed to account for continental drift. On the basis of these data, the Atlantic Ocean would have first appeared in early Jurassic time, about 180 million years ago.

The spreading of sea floors has other implications. There is evidence that tectonic activity along coasts such as that of eastern Asia is caused partly by the forcible thrusting of sea floor under continent in those areas. Inactive coasts, such as those of the Atlantic Ocean, may indicate passive transport away from mid-ocean ridges. It seems safe to predict that continental drift must be reckoned with as a fact in future geological studies.

Polarity reversals appear to be the long-sought means of correlating rocks of ocean basins with those of continents. They are especially applicable to nonfossiliferous rocks. It is fairly easy to establish the ages of polarity shifts by radiometric means, and

PATTERNS OF CONTINENTAL DRIFT were better understood as a result of geological discoveries made in 1967.



these ages can then be applied wherever corresponding reversals are identified.

Vulcanology. Geologists and archaeologists cooperating in a study of the Aegean island of Thira have found evidence of a tremendous volcanic eruption there about 3,500 years ago. The eruption spread a layer of ashes over land and sea and caused high tidal waves, a cultural collapse, and perhaps climatic changes. The event may prove to be an invaluable reference point for many historical studies, and may be the factual basis for the tales of the sinking of Atlantis. (See also ARCHAEOLOGY.)

Paleontology. In 1967 there continued to be high interest in primitive fossils, especially in relation to determining the beginning of the Cambrian period. Some investigators are inclined to establish the base of the Cambrian rock system below the first appearance of abundant many-celled animals (about 600 million years ago). However, elongate casts of objects with corrugated sides and bilateral symmetry have been found north of Lake Huron in Lower Proterozoic quartzite dated at between 2 and 2.5 billion years. If the casts represent wormlike organisms, they are the earliest animals known.

Fossiliferous Cambrian, Ordovician, Mississippian, and Pennsylvanian rocks have been reported in southern Mexico. This proves for the first time that the area has a history of tectonic and sedimentary events dating from Paleozoic times.

Astrogeology. An analysis of the moon's surface was accomplished by the U. S. Surveyor 5 spacecraft, which landed on the moon on Sept. 10, 1967. The small area analyzed consists of a basaltic material containing up to 63% oxygen, 21.5% silicon, and lesser percentages of other elements. The sample suggests that the moon is very earthlike in composition, and probably in early geologic history as well. (See also SPACE EXPLORATION.)

WILLIAM LEE STOKES
University of Utah

GEORGIA

Georgia began the year 1967 with the results of its November 1966 gubernatorial election still undecided. Republican Howard H. Callaway ran ahead of Democrat Lester G. Maddox by about 3,000 votes, but a write-in campaign for a former governor, Ellis Arnall, attracted enough support to prevent any candidate from receiving a majority, as is required by the Georgia state constitution.

On the morning of Jan. 10, 1967, the two houses of the General Assembly met in joint session to select a governor from the two leading candidates. When a day-long recount of the official election returns failed to produce a majority, the heavily Democratic Assembly elected Maddox by a roll-call vote of 182 to 66. The new governor took the oath of office that evening in a private ceremony, and formal inaugural ceremonies were held the next day.

Governor Maddox, who had been known as a strong segregationist, began his administration by calling for moderation along the lines established by his predecessor, Gov. Carl E. Sanders. The 1967 session of the General Assembly completed a court-ordered reapportionment of both houses and passed a variety of legislation, including substantial salary increases for state executives.

Atlanta continued to consolidate its position as the "economic capital" of the southeastern United States. Economic indicators, including bank clearings, permits for office construction, employment increases, and airline traffic, placed it statistically among the nation's 10 leading cities.

WIDE WORLD

LESTER MADDOX (*right*) is publicly sworn in as governor of Georgia in front of the state capitol on January 11.

Legislation. In reapportioning itself, the Georgia General Assembly reduced the membership of the House of Representatives by 10 (from 205 to 195 members), to take effect with the 1968 legislative session. The Senate membership was increased by 2 (from 54 to 56 members); but since the number of

GEORGIA • Information Highlights

Area: 58,876 square miles (152,489 sq km).
Population: 4,511,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Atlanta, the capital, 535,000; Savannah, 141,000; Macon, 128,000; Columbus; 125,000.
Government: *Chief Officers*—governor, Lestor G. Maddox (Democrat); lt. gov., George T. Smith (D); secy. of state, Ben W. Fortson, Jr. (D); atty. gen., Arthur K. Bolton (D); treas., Jack B. Ray; supt. of schools, Jack P. Nix; chief justice, William H. Duckworth. *Legislature*—General Assembly (met Jan. 9–March 17, 1967): Senate, 54 members (8 Republicans, 45 Democrats, 1 Independent); House of Representatives, 205 members (21 R, 184 D).
Education: *School enrollment* (1965–66)—public elementary, 721,700 pupils (24,318 teachers); public secondary, 367,778 pupils (15,324 teachers); nonpublic schools, 29,500 pupils (1,440 teachers); higher (fall 1965), 82,347 students. *Public school expenditures* (1965–66)—$369,368,000 ($384 per pupil); average teacher's salary, $5,350.
Public Finance (fiscal year 1967): *Revenues,* $1,039,914 (3% sales tax, $241,787,960; motor fuel tax, $122,720,817; federal funds, $315,653,301). *Expenditures,* $1,025,665,596 (education, $507,059,857; health welfare, and safety, $222,-192,362; highways, $223,637,027). *State debt,* $776,493,000.
Personal Income (1966): $10,579,000,000; average annual income per person, $2,379.
Public Assistance (fiscal year 1967): $117,737,925 to 213,534 cases (aged, $67,651,478; dependent children, $26,029,708).
Labor Force (employed persons, annual average 1966): Agricultural, 96,200; nonagricultural (wage and salary earners), 1,542,100 (27.7% manufacturing, 18% trade, 15.7% government). *Unemployed* (1966 average)—57,600.
Manufacturing (1965): Value added by manufacture, $4,060,-703,000 (transportation equipment, $700,417,000; food and products, $493,310,000; machinery, $212,903,000).
Agriculture (1966): *Cash farm income,* $1,095,982,000 (livestock, $632,678,000; crops, $383,131,000; govt. payments, $80,173,000). *Chief crops* (tons)—peanuts, 408,000 (ranks 1st among the states); peaches, 91,200 (rank, 3rd); pecans, 18,000 (rank, 2d); corn for grain, 1.647,072; hay, 867,000.
Mining (1966): *Production value,* $148.597,000. *Chief minerals* (tons)—stone, 25,690,000; clays, 5,128,000; sand and gravel, 3,915,000; iron ore, 447,000; talc, 41,000.
Fisheries (1966): *Commercial catch,* 16,022,994 pounds ($3,882,-653). *Leading species*—hard blue crabs, 8.555 820 pounds ($324,767); shrimp, 6,475,746 pounds ($3,340,985).
Transportation: *Roads* (1965) 101,500 miles (163,345 km); *motor vehicles:* (1966), 2,229,623; *railroads* (1965), 5,702 track miles (9,175 km); *airports with scheduled serv.,* 13.
Communications: (1966): *Telephones,* 1,687,900; *television stations* (1967), 22; *radio stations,* 199; *newspapers,* 33 (daily circulation, 986,000).

senators is fixed by the state constitution, the increase must be voted upon in the 1968 general election. The General Assembly also voted to increase the term of membership in both houses from 2 years to 4 years, subject to approval by the electorate.

The annual salary of the governor of Georgia was raised to $42,500, and that of the lieutenant governor to $20,000. Several other state officers received salary increases, as did the justices of the state supreme court and the judges of the court of appeals. A retirement plan, subject to voter approval, was adopted for members of the Assembly.

The appropriation bill for fiscal 1968 amounted to $785.3 million. Among other measures passed by the Assembly were bills providing for air pollution control, guaranteeing equal pay for males and females for comparable work, and making incitement to riot a misdemeanor.

Race Relations. Soon after his inauguration, Governor Maddox received a delegation of Negro legislators and promised to "deal fairly" in giving Negroes increased opportunities in state government. The governor signed a jury reform bill in March and shortly thereafter began an investigation of the county prison system. By July he had recommended the appointment of a total of 15 Negroes to serve on local draft boards. Racial disorders in Atlanta on June 19, following a speech by "black power" advocate Stokley Carmichael, resulted in several injuries and arrests.

Sports. The Chiefs of the National Professional Soccer League chose Atlanta as their home city and played their 1967 home games in Atlanta Stadium.

JOHN C. MEADOWS
The University of Georgia

GERMAN LITERATURE

German literature in 1967 reflected a pre-World War II cultural nationalism, tempered by consciousness of the current unity of Western thought.

Fiction. The question of personal identity is the core of Rolf Roggenbuck's novel *Der Nämlichkeitsnachweis,* which depicts man as an entity both known and unknown, who wants to follow the dictum "Know thyself," but is confronted with the unanswerable query "Who am I?" The search for the self is characterized in Roggenbuck's work by alternating forms of address—from first person to third—signifying the ambivalent position of man in relation to himself and his fellow men. Günther Bruno Fuchs, in his novel *Bericht eines Bremer Stadtmusikanten,* created a satiric parable directed against those who create social institutions that threaten to overcome their creators. Hans Noever's *Venedig liegt bei Cleve,* which resembles a prose drama, concentrates on the development of human life past, present, and future.

Under the title *Unerhörte Begebenheiten,* Hans Christoph Buch united six stories that evolve from one another, starting with the death of an old grandfather and ending with the destruction of an entire army. Although decidedly of serious intent, the book tends toward satiric excess. Marie Luise Kaschnitz' collection of stories *Ferngespräche* portrays various types of individuals who, while not social outsiders, are nonetheless isolated and lost.

Nonfiction. *Als wär's ein Stück von mir* is the title of the memoirs of dramatist Carl Zuckmayer, in which he recounts his friendships and encounters with Germany's leading men of letters, from Gerhart Hauptmann to Bertolt Brecht and Max Frisch. More than a mere literary reminiscence, however, the book tells the story of one man's experience of life. A similar volume is *Dichtergehäuse,* selections from the autobiographical notes of Werner Bergengruen, edited by Charlotte Bergengruen, with an epilogue by Emil Staiger. The notes illustrate the driving motif of the author's life: to be a man who, although a writer, is not separated from the world of common experience. Schalom Ben-Chorin's *Zwiesprache mit Martin Buber* is a description of Buber's last years, recounting conversations with the venerable old man as well as episodes in Buber's life. The work also contains selections from Buber's notes and diaries that help him come to life as a human being, an individual whose love of man was in the truest sense a deep love of God.

Ernst Loewy's *Literatur unterm Hakenkreuz* is a penetrating analysis of the roots of Nazi belles lettres, maintaining that Nazi literature was not the mere outpouring of government propaganda but was rooted in such sources as the delusions of German romanticism, the dream of a folk soul, and the militant nationalism inherent in Germany's past.

Poetry. Hans Peter Keller's *Panoptikum aus dem Augenwinkel* is a collection of lyrics that are more fragments than whole poems, each a pictorial point in which contemporary language is so extended as to reveal entirely new meanings. Horst Bienek's *Was war was ist* contains 25 autobiographical poems, each a tightly knit narrative expressing a personal *Weltanschauung* (world view) and self-revelation. In *Etwas geschieht,* Wolfgang Weyrauch presents in monologue form the reminiscences of various individuals: lovers, the dying, demonstrators, and soldiers. Walter Helmut Fritz' *Die Zuverlässigkeit der Unruhe* is a direct confrontation between author and reader that demands a personal response from every individual. Fritz' linguistic mastery is revealed by his descriptive portraits of such figures in man's spiritual history as Michelangelo, da Vinci, and Pascal. *Ventile,* a collection of 28 poems by Günter Herburger, written in rapidly flowing, sharp colloquial language, is a comment on social, political, and psychological aspects of contemporary life.

Günter Grass' third volume of poems, *Ausgefragt,* epitomizes the "naturalness of reality" and, at the same time, the ambivalent interpretations that can be given to everyday occurrences. Günther Bruno Fuchs' *Prosa Vita* is the witty protest of a man who prefers his own world of "out-of-the-way streets and backyards." In *Wohnstadt zwischen den Atemzügen,* Johannes Poethen presents a mixture of prose and verse that sharply contrasts the freedom of classical Greece with the spiritual enslavement of contemporary urban life.

Scholarly Editions. The Insel Verlag's historical-critical edition of the works of Rainer Maria Rilke, containing Rilke's entire literary corpus, was completed in 1967 with the publication of the sixth volume. In addition to works by Rilke, the final volume contains an epilogue by the German literary scholar Ernst Zinn, with notes.

The first complete edition of the dramatic works of the 10th century nun Roswitha von Gandersheim was issued by Winkler Verlag in 1967, with an introduction by Bert Nagel. Roswitha's plays served as a basis for later morality plays.

RANDOLPH J. KLAWITER
University of Notre Dame

GERMANY

STATE FUNERAL of former Chancellor Konrad Adenauer, April 25, was attended by all the Allied heads of state. Here the coffin is borne through the great west doors of Cologne Cathedral. Burial was near Adenauer's home in village of Rhöndorf.

UPI

GERMANY

Germany is divided politically into West Germany (Federal Republic of Germany) and Communist East Germany (German Democratic Republic). The city of Berlin is also divided, but the Western powers and the Soviet Union retain in both West and East Berlin rights based on the Berlin Declaration of June 8, 1945, reaffirmed by the Potsdam Agreement of Aug. 2, 1945.

WEST GERMANY

(FEDERAL REPUBLIC OF GERMANY)

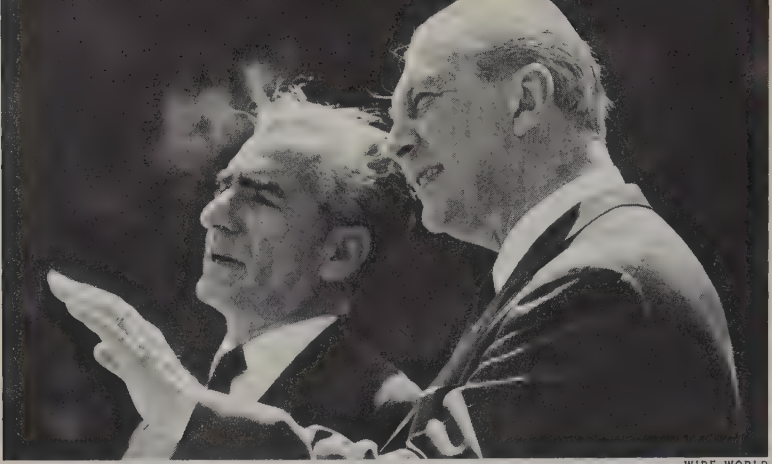
The first test of a government of national unity in West Germany produced satisfactory results in 1967, especially in arresting a depression that began in 1966. However, both of the country's major parties, which are committed to the "grand coalition" government of Chancellor Kurt Georg Kiesinger, anticipated a return to party government after the general elections of 1969.

Grand Coalition. Toward the end of 1966 the government of Chancellor Ludwig Erhard encountered a fatal crisis of confidence. Erhard, who had taken over the chancellorship from Konrad Adenauer in 1963, had enjoyed great popularity and respect as the architect of West Germany's postwar economic recovery. He also had performed extremely well in the election campaign of 1965. But thereafter, Erhard's capacity as a political leader was subjected to increasing doubt. His authority was considerably weakened shortly after the 1965 election when his government was obliged by a financial crisis to revoke certain public spending measures that the Bundestag (lower house of parliament) had passed with the government's approval before the election campaign.

In addition it was obvious that drastic action would be needed to overcome a rapidly growing budget deficit. Unfortunately, however, the warring social interest groups in the loosely integrated Christian Democratic Union could not agree on where the budget should be cut. Erhard lacked Adenauer's iron will and great political cunning, and in a no longer expanding economy the government could not afford to make simultaneous concessions to all the different interests.

Because of the recession the budget could be balanced only by cutting special subsidies and social welfare programs or by raising taxes. After long disputes, Erhard's cabinet decided to raise taxes, whereupon the Free Democratic party, with which Erhard's Christian Democrats had formed a majority coalition in the Bundestag, withdrew from the government.

The tax issue probably was not the real motive for the Free Democrats' withdrawal. They had always feared that they might lose their identity in too close an association with the Christian Democrats, and their concern was redoubled by the col-



WIDE WORLD

SUMMIT MEETING of Chancellor Kiesinger (*right*) and the Shah of Iran in Bonn on May 28 typified positive foreign policy initiatives undertaken by the new chancellor.

lapse of Erhard's popularity and the simultaneous appearance of a new radical right-wing group, the National Democratic party, that threatened to attract voters from Free Democratic ranks.

Many Free Democrats thought their party could form a new coalition government with the Social Democrats—a government that would have had only a bare majority—but the Social Democrats were unwilling to try to build a government on that basis. The Social Democrats were reluctant to associate themselves with a party oriented to the right of the Christian Democrats when they felt they could count on close cooperation with at least those Christian Democrats who rely on working-class support.

On Dec. 1, 1966, therefore, the Christian Democrats and the Social Democrats formed a "grand coalition" under the direction of Kurt Georg Kiesinger, the popular Christian Democratic governor of Baden-Württemberg. Willy Brandt, the mayor of West Berlin and chairman of the Social Democratic party, became vice chancellor and foreign minister.

Of 20 cabinet seats in the new government, 11 went to Christian Democrats—among them Franz Josef Strauss, chairman of the Bavarian Christian Democrats, who became minister of finance, and Gerhard Schroeder, a former foreign minister, who became minister of defense. Among the nine Social Democrats who were the first in their party since pre-Nazi days to obtain cabinet posts were Herbert Wehner, minister of all-German affairs, and Professor Karl Schiller, minister of economics.

Many Socialists opposed entering the grand coalition. They felt that the party would inherit responsibility for the failures of the Christian Democrats without inheriting credit for any of the achievements. Brandt and Wehner, however, argued that failure to enter the proposed government might precipitate a grave government crisis. Their view prevailed, and the two parties formed a government that they expected would rule until the next federal elections in 1969.

Anti-Recession Measures. The first major task the Kiesinger government set itself was to halt the recession it inherited from the previous government and to initiate a period of new economic growth. The budget deficit represented very largely the skyrocketing cost of upholding existing legislation—for example, broad-scale social welfare programs and

FEDERAL REPUBLIC OF GERMANY • Information Highlights

Area: 95,937 square miles (248,541 sq km).
Population: 57,616,000 (Jan. 31, 1967 est.).
Chief Cities (1965 est.): Bonn, the capital, 141,669; West Berlin (1966 est.), 2,190,577; Hamburg, 1,856,953.
Government: *President*—Heinrich Lübke (took office July 1, 1959); *Chancellor*—Kurt Georg Kiesinger (took office Dec. 1, 1966). *Parliament*—Upper House (Bundesrat), 45 members; (name of 2d house): Lower House (Bundestag), 498 members (party seating, 1966: Christian Democratic Union and Christian Social Union, 247; Social Democratic party, 202; Free Democratic party, 49).
Religious Faiths: Evangelical, 51% of population; Roman Catholics, 47.6%; others, 1.4%.
Education: *Literacy rate*, 99% of population. *Total school enrollment* (1964)—8,837,116 (primary, 5,362,899; secondary, 1,268,031; technical/vocational, 1,951,225; higher, 254,961).
Finance (1966 est.): *Revenues*, $16,185,000,000; *expenditures*, $16,742,500,000; *public debt*, $8,902,500,000; *monetary unit*, Deutsche mark (4 Deutsche marks equal U. S.$1).
Gross National Product (1966): $119,475,000,000.
National Income (1966): $90,500,000,000; average annual income per person, $1,574.
Economic Indexes (1966): *Industrial production*, 159 (1958=100); *agricultural production* (1965), 126 (1956–57=100); *cost of living*, 122 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 4,536,000; cement, 34,740,000; gasoline (1965), 9,785,000; beer (1965), 6,743,000; wheat flour, 3,180,000; meat, 3,063,600; sugar, 773,000; wine, 442,000; aluminum, 423,600.
Crops (metric tons, 1966): Potatoes, 18,833,000 (ranks 3d among world producers); rye, 2,693,000 (world rank, 3d); sugar beets, 11,303,000; wheat, 4,533,000.
Minerals (metric tons, 1966): Lignite, 98,088,000 (ranks 3d among world producers); potash (1965), 2,399,000 (world rank, 2d); barite (1965), 445,000 (world rank, 2d); feldspar, 335,000 (world rank, 2d); coal, 126,288,000; iron ore, 7,200,000; crude petroleum, 7,872,000.
Foreign Trade (1966): *Exports*, $20,147,500,000 (chief exports: nonelectrical machinery, $4.564,500.000; transport equipment, $2,862.300,000; electrical machinery, $1.619.300.000; iron and steel, $1,461,500,000); *imports*, $18,037,500,000 (chief imports: petroleum and petroleum products, $1,373,800,000; nonelectrical machinery, $1,223,000,000; fruit and vegetables, $1,162,700,000). *Chief trading partners:* France (took 12% of exports, supplied 12% of imports); U. S. (took 9% of exports, supplied 13% of imports).
Transportation: *Roads* (1966), 209.495 miles (3,371.500 km); *motor vehicles* (1965), 10,714,746 (automobiles, 9,718,778); *railways* (1965), 22 022 miles (35.433 km); *merchant vessels* (1966), 860 (5.401,000 gross registered tons).
Communications (1967): *Telephones*, 9,532,417; *television stations*, 143; *television sets*, 13.500.000; *radios* (1965), 26.000,000; *newspapers* (1965), 411 (daily circulation, 19,264,000).

commitments to buy arms abroad. Because the government could not escape many of these commitments, it adopted a medium-term finance plan.

In accordance with its plan the government estimated the available funds for the years 1968 through 1971 and laid down the sums available for each category of public expenditure. The new plan presupposes a 4% average annual increase in the gross national product. The federal budget is expected to grow from $20.2 billion—the record sum approved by the cabinet on September 13 for fiscal 1968—to $23.4 billion for the 1971 fiscal year.

The 1968 budget was planned to be fully balanced, albeit with the help of government borrowing. The borrowing, however, seemed to be unobjectionable because the public indebtedness of the Bonn republic is very small. But government use of the capital market did have the undesirable effect of restricting private investment.

The government had further recourse to the capital market in order to finance a massive program of pump-priming in plant investment. Altogether $1.8 billion was provided to revive the economy.

Other Economic Developments. Largely because of government intervention, especially financing of public investments by additional credits, the downward trend to the economy was brought to a standstill by September 1967. Although no considerable upward trend had begun by the year's end, planners expected that 1968 would witness expanding production and further growth of the economy.

From January to September 1967, German industries produced 4.6% less than in the same period of 1966. The recession undoubtedly would have been more severe if German industries had not managed to increase their exports by about 10%. High exports and falling imports resulted in a monthly surplus in the balance of payments of more than $250 million. Because German exports of capital exceeded foreign investments in Germany, however, the capital reserves of the federal bank declined slightly. Whereas the reserves had amounted to $7.45 billion at the end of 1966, they amounted to only $7.3 billion on August 31, 1967.

The number of the unemployed in West Germany reached 359,000 at the end of August, compared with 106,000 at the same time in 1966. The larger figure, nevertheless, is an extremely low one, even taking into account the number of workers on short hours, who in August numbered about 64,000. Simultaneously the number of foreign workers employed in West Germany fell to about 900,000 from 1,200,000 at the end of 1966.

While the major part of the West German unemployment should disappear with the expected return of prosperity in 1968, a serious problem of structural unemployment exists in the Ruhr and Saar districts where the German coal-mining industry is located. German dependence on coal has been shrinking steadily for 10 years, as oil, natural gas, and atomic energy have come into more general use. In 1957 coal provided 69% of the power used in Germany. In 1967 it provided only 36%, while oil in the same period extended its quota from 12% to 48%.

The end of this shift is not in sight. Whereas 604,000 workers were employed in coal mining in 1957, only 295,000 were so employed in 1967. Some 40,000 miners lost their jobs in 1967 alone, and an estimated 80,000 others will lose their jobs by 1971. The amount of West German coal mined has dropped from 149 million tons in 1957 to 126 million in 1966, and experts estimate that eventually not more than 90 million tons will be marketable.

The government accordingly has adopted a program that induces the mine owners to plan for partial closing of their mines while the government itself seeks to induce new industries to locate in the Ruhr and Saar in order to create new jobs for the unemployed miners.

Political Developments. The future of the West German economy will largely determine future political developments in the country. From its inception, the grand coalition of Christian Democrats and Social Democrats commanded 447 votes in the Bundestag, while the only opposition party, the Free Democrats, had only 49 votes. The Free Democrats, therefore, were in no position to conduct an effective opposition, and the government was in effect one of national unity.

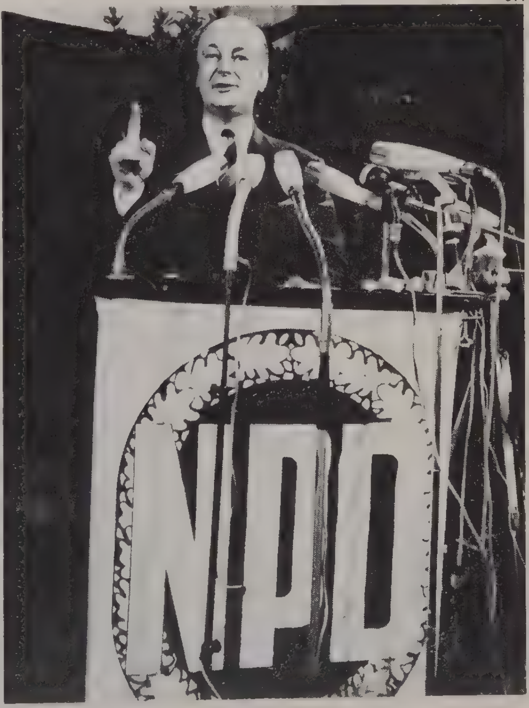
Parliamentary debates tend to lose interest in such circumstances, with the result in Germany that opposition groups begin to gravitate toward radical movments or parties of both extremes. In defense of centrist political rule, therefore, the two major parties agreed to reform the system of parliamentary elections to eliminate its inherent tendency to deny a clear majority to any party.

Until the 1969 elections there obviously will be some restlessness among left-wing Social Democrats, although that restlessness did not lead in 1967 to any group formation. On the right, however, there was a clear crystalization of support for the National Democratic party.

The National Democratic party was founded in 1964 from the remains of several shattered, right-wing splinter parties. Traditionally these parties have commanded about 4% of the total national vote, but beginning in 1966 the National Democratic

RIGHT-WING ACTIVIST Adolf von Thadden accepts leadership of National Democrats at Hannover on November 12.

UPI



party broke through to higher status. The breakthrough occurred simultaneously with the economic recession and the deterioration of confidence in Chancellor Erhard's government.

On Nov. 6, 1966, the party received 7.9% of the popular vote in provincial elections in Hesse, and on November 20 it won 7.4% in the Bavarian elections. In 1967 it won 6% and 7% of the popular vote in state elections in Schleswig-Holstein, Rhineland-Palatinate, and Lower Saxony.

The National Democratic party is generally considered to be a neo-Nazi party. In order to deny the government any pretext to suppress it, its leaders have taken care to adhere to democratic procedures and to moderate the real aims of the party, but it presents itself as the rallying point "for the renascence of the German nation." Its leaders deplore the alleged domination of the government by special interest groups, by politicians ready to give up German national claims, and by cultural Bolshevists. It denounces as traitors all Germans who accept the present borders with Poland and Czechoslovakia and who feel no concern over the neutralization of Austria or over Italian rule of the South Tyrol.

The party's chief spawning grounds are small towns in Protestant districts, where the Christian Democratic party is less safely anchored than it is in Catholic areas. Many former Nazis have flocked to the party, which partly explains the fact that there are more middle-aged than young members.

At a national party convention at Hannover on Nov. 10–12, 1967, Adolf von Thadden, a member of an old Prussian Junker family, was elected chairman of the party. His election appeared to have ended for the time being a serious threat of a party split that had emerged in the spring. The official party program adopted in November demanded the creation of a national command for the German armed forces in place of NATO integration. Among the constitutional changes demanded were the introduction of a popular referendum and plebiscite on reunification, and direct election of the federal chief executive.

Foreign Policy. When it took office, the Kiesinger government promised certain changes in German foreign policy. Although the government (and the overwhelming majority of West Germans) consider close relations with the United States to be the primary guarantee of Germany's international security, the government nevertheless sought a franker exchange of ideas between Bonn and Washington. To this end, Chancellor Kiesinger and Foreign Minister Brandt visited Washington in late August and reportedly enjoyed a considerable measure of success in discussions with U. S. leaders. The principal outstanding problem areas they dealt with were West German anxiety over the possibility of a U. S. withdrawal of forces from Germany; U. S. insistence on financial help from West Germany in maintaining those forces; and German fears that the U. S.-Soviet nuclear nonproliferation accord might limit German aims in peaceful development of atomic power.

Kiesinger also proposed to restore the friendly relations with France that had existed during Adenauer's administrations but had suffered under Erhard's. At a meeting in Paris on January 13–14, Chancellor Kiesinger and President de Gaulle restored a degree of warmth to top-level relations but failed to produce any agreement on new, common policies. German insistence on close U. S.-West German relations and the German desire to see Britain brought into the European Common Market made it unlikely that Franco-German cooperation would be significantly activated in the foreseeable future.

Kiesinger's government also took the initiative in seeking to ease relations with the countries of eastern Europe. While his government continued to adhere in other respects to the Hallstein doctrine, under which West Germany denies official diplomatic recognition to any country except the Soviet Union that maintains diplomatic relations with East

PICTORIAL PARADE

CAPTIVITY of East Germans, many of whom seek greater opportunity in West Germany, is symbolized by this group of East German soldiers implanting metal fence in unguarded wood at Braunlage.

Germany, it declared its willingness to ignore the doctrine with countries inside the Soviet orbit.

In January, Rumania agreed to an exchange of ambassadors, and throughout the year Hungary appeared to be moving toward similar agreement. Yugoslavia also seemed prepared to open diplomatic relations with the Bonn republic. Bulgaria and Czechoslovakia, however, flatly refused to do so (although the latter signed a trade agreement that will require it to exchange trade missions with West Germany), and efforts to improve West German-Soviet relations did not get off the ground.

On Jan. 31, 1968, West Germany and Yugoslavia resumed diplomatic relations after a break of 10 years. Bonn had severed relations in 1958 after Yugoslavia formally recognized East Germany.

Attempts to ease tensions between the two Germanys began promisingly in 1967, but stalled. In the spring Kiesinger initiated an exchange of letters with East German Premier Willi Stoph. On the basis of that cordial beginning, Stoph then proposed a direct confrontation with Kiesinger. But the chancellor rejected the invitation on the ground that a meeting would come too close to diplomatic recognition of the East German regime.

The West German government considers itself the only political representative of all the German people, and it has no intention of dropping that claim. Kiesinger's government had reasoned, however, that since the Germans are powerless to solve the political problem of their division, they should at least discuss how to make life easier for everyone.

Although the Bonn government likes to regard its Eastern policy as paralleling the U. S. policy of détente, it has shown considerable apprehension about U. S.-Soviet negotiations on the draft treaty to prevent the spread of nuclear weapons. Bonn feels that any nonproliferation agreement should be of only limited duration in view of the uncertainties about what future research will produce. While Bonn does not wish to own nuclear weapons, it does wish to develop nuclear power for peaceful purposes, and it fears that the nonproliferation agreement may hinder that development.

Moreover, Bonn is concerned that the international control envisaged in the treaty draft might enable the Soviets to conduct industrial espionage in West Germany. These worries, which are shared by many nations, have provided a continuous topic of conversation in U. S.-West German diplomatic exchanges. (See also ATOMIC ENERGY.)

West Berlin. Cut off 150 miles inside the Iron Curtain, West Berlin remains a showcase of Western technology and the continent's leading city in industrial production. But ever since the East Germans built the wall around their zone West Berlin's problems have increased. The number of old people living in the city is exceptionally high. Without immigration from other parts of West Germany the city cannot hope to maintain its population.

West Berlin had a clear-cut role in the Cold War; but that role has diminished in the recent period of limited détente, and the hiatus has led to political feuding, particularly in the ruling Social Democratic party. Furthermore, Mayor Brandt's successor, Heinrich Albertz, demonstrated far less assurance than Brandt in directing the unwieldy party in the city.

In city elections for the House of Deputies on March 12 the Socialists suffered a severe setback. Although the party retained an absolute majority in the House, it lost eight Socialist seats to the Christian Democrats.

On June 2 serious clashes occurred between police and students demonstrating against the visiting shah of Iran. The police acted with undue harshness and killed one student in the fracas. Mayor Albertz's moral authority suffered when he exonerated the police completely, a position from which he had to retreat shortly thereafter. Subsequently two members of the city government resigned. Mayor Albertz failed to find an acceptable successor for one of them, and on September 26 he himself resigned

The city parliament elected 41-year-old Klaus Schütz mayor on October 19. Schütz had been a representative of the city in Bonn, and when Mayor Brandt became foreign minister in December 1966, Schütz had accepted Brandt's invitation to become undersecretary of state in the foreign office. By mere coincidence, Berlin was due to receive the annual chairmanship of the Federal Council in Bonn in 1968, and thus shortly after Schütz was elected mayor he was also elected chairman of the Federal Council. The coincidence will underline boldly the connection between West Berlin and Bonn.

Berlin's budget for the 1968 fiscal year is based on anticipated income of $1.3 billion (of which $601 million will be provided in federal government subsidies) and expenditures of $1.46 billion.

Death of Adenauer. Former Chancellor Konrad Adenauer, who died on April 19 at the age of 91, was buried in the small Rhineland town of Rhöndorf on April 25, after a state funeral in Cologne attended by President Johnson and the heads of state of all the principal nations of western Europe. (See also ADENAUER.)

EAST GERMANY

(GERMAN DEMOCRATIC REPUBLIC)

The East Germans have made considerable economic progress since the Berlin wall was built and population flow to West Germany halted in 1961. Of 3 million East Germans who fled to West Germany before 1961 a very large portion were young, and East Germany's population, therefore, is overaged to a degree where future expansion of production will be limited by a shrinking labor force.

Nevertheless, apart from the Soviet Union, East Germany is the most productive industrial state in eastern Europe and the 7th or 8th in industrial output in the world.

Trade and Production. East Germany is the Soviet Union's most important trading partner. In 1967, 20% of the USSR's foreign trade was with the German Democratic Republic, which on its part sent about 45% of all its products to the USSR. East Germany's chief export items are chemicals, machine tools, precision machinery, optical instruments, textiles, and furniture. A substantial part of its Soviet imports consists of raw materials and semimanufactured products to be processed in East Germany.

The progress of East German production has been due largely to an improved expert management. Because the regime feels somewhat more secure than it did, it has become slightly more tolerant with regard to the expression of opinion. However, the attitude of the government in particular cases remains unpredictable. (For example, there is no question that all East German writers must toe the party line very carefully.)

EAST GERMANY • Information Highlights

Area: 41,814 square miles (108,299 sq km).
Population: 17,067,000 (July 1, 1966 est.).
Chief Cities (1965 est.): East Berlin, the capital, 1,073,647; Leipzig, 594,661; Dresden, 504,910.
Government: *Chairman of the Council of State*—Walter Ulbricht (took office Sept. 12, 1960); *Minister President*—Willi Stoph (took office Sept. 24, 1964). *Parliament*—People's Chamber, 434 members.
Religious Faiths: Protestants, 80% of population; Roman Catholics, 11%; others, 9%.
Education: *Literacy rate*, 99% of population. *Total school enrollment* (1964)—2,923,370 (primary, 2,247,557; secondary, 81,097; teacher-training and technical, 515,819; higher, 78,897).
Finance (1965 est.): *Revenues*, $15,000,000,000; *expenditures*, $14,900,000,000; *monetary unit*, Ostmark (2.22 Ostmarks equal U. S.$1).
Net Material Product (1965): $37,400,000,000.
Economic Indexes: *Industrial production* (1966), 169 (1958=100); *cost of living* (1965), 97 (1958=100).
Manufacturing (metric tons, 1966): Cement, 6,456,000; crude steel, 4,536,000; gasoline (1965), 1,604,000; beer (1965).
Crops (metric tons, 1966): Potatoes, 12,501,000; sugar beets, 5,899,000; rye, 1,730,000; wheat, 1,500,000.
Minerals (metric tons, 1965): Lignite (1966), 249,036,000 (ranks 1st among world producers); lime, 3,441,000; coal (1966), 1,992,000; iron ore (1966), 1,716,000.
Foreign Trade (1965): *Exports*, $3,067,000,000; *imports*, $2,802,000,000. *Chief trading partners* (1965): USSR (took 46% of exports, supplied 45% of imports); Czechoslovakia (took 10% of exports, supplied 9% of imports); West Germany (took 9% of exports, supplied 10% of imports).
Transportation: *Classified roads* (1964), 28,291 miles (45,530 km); *motor vehicles* (1965), 820,517 (automobiles, 661,584); *railways* (1965), 9,232 miles (14,856 km); *merchant vessels* (1966), 97 (596,000 gross registered tons).
Communications (1967): *Telephones*, 1,723,814; *television stations*, 22; *television sets*, 3,600,000; *radios* (1964), 5,759,000; *newspapers* (1964), 34 (daily circulation, 6,822,000).

Political Events. On July 2, elections were held in East Germany for a new People's Chamber and in East Berlin for a new Municipal Assembly. As usual the voters were allowed to vote only for or against a single so-called "national front" list of candidates. The Chamber list was endorsed by 99.93% of the voters, and the Assembly list by 99.98%.

Walter Ulbricht, the 74-year-old chairman of the state council, remained the unchallenged ruler of the German Democratic Republic. Although Willi Stoph is the prime minister, Erich Honecker, a younger member of the East German Communist party, is considered the heir-presumptive to Ulbricht.

Foreign Policy. The chief aim of East German foreign policy is to gain recognition as a sovereign state outside the Soviet orbit. Accordingly, since 1965 closer relations between West and East Germany have been made dependent on Bonn's willingness to recognize the German Democratic Republic. Cultural exchanges with West Germany that existed between 1963 and 1965 have been discontinued, as have general permissions for West Berliners to visit East Berlin.

The East German government has resented West German attempts to establish diplomatic relations with East Germany's eastern neighbors. In order to block these attempts, which were pressed with some success in 1967, the East German government concluded treaties of friendship, cooperation, and mutual assistance with Poland and Czechoslovakia. The treaties were ratified by the East German People's Chamber on May 2, 1967.

On July 5 announcement was made that the mayor of East Berlin, Friederich Ebert, the son of the first president of the Weimar Republic, had resigned for reasons of health. Herbert Fechner, district mayor of Köpenick, was elected his successor.

(See also EUROPE.)

HAJO HOLBORN
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EASTFOTO

CHE
EVOLUTION

MASSIVE CELEBRATIONS throughout eastern Europe marked the 50th anniversary of the Bolshevik Revolution. East German leader Walter Ulbricht is shown addressing Communist Party Central Committee in East Berlin Auditorium, November 7.

GHANA

The National Liberation Council, which has ruled Ghana since President Kwame Nkrumah was overthrown in February 1966, continued its efforts in 1967 to consolidate and stabilize the country's economy. On the political front, criticisms mounted of the National Liberation Council, headed by Lt.-Gen. Joseph Ankrah, and demands for a return to civilian rule were intensified.

Issue of Civilian Rule. On March 31, in response to increasing criticism of the military regime, Gen. A. A. Afrifa stipulated four conditions the government felt must be met before there could be a return to representative government: (1) the people must be reeducated regarding their political rights; (2) they must become accustomed to their newly won freedom and understand the qualities of leadership; (3) the image of Nkrumah's Convention People's party must be finally destroyed; (4) the National Liberation Council must be assured that the country is on the road to economic recovery and that the administration has been cleansed of the faults that led to the coup in 1966.

Political Disturbances. On January 23 the National Liberation Front revealed the discovery of a plot by supporters of former President Nkrumah to assassinate government leaders and seize power.

A more serious political disturbance occurred on April 17, when an army squadron staged an abortive coup and briefly gained control of several of the principal buildings in Accra. Lt.-Gen. Emmanuel K. Kotoka, commander of the Ghana Armed Forces and an original member of the National Liberation Council, was killed in the fighting. The government did not believe that the coup was part of a movement to restore Nkrumah to power.

Over 800 persons were detained for questioning following the coup attempt, and on May 3 the government announced a reshuffling of senior army officers. A military court on May 5 sentenced to death two of the three lieutenants charged with instigating the coup. Their executions by a firing squad on May 9 were the first public political executions in Ghana's history.

AUTHENTICATED NEWS INTERNATIONAL

ALUMINUM PLANT at Tema, Ghana, built jointly by Kaiser Aluminum and Reynolds Metals, is the largest consumer of power from the Volta River hydroelectric project.

Political Changes. The National Liberation Council announced on January 13 that military tribunals would assume jurisdiction over subversive offenses committed by civilians that were punishable by death or long-term imprisonment. The military tribunals would therefore be able to "expeditiously" combat subversion, including publication of false statements likely to undermine the government.

On June 30 the National Liberation Council announced the creation of a 17-member Executive Council, including 14 civilians with ministerial re-

GHANA • Information Highlights

Area: 92,100 square miles (238,539 sq km).
Population: 7,945,000 (July 1, 1966 est.).
Chief City (1966 est.): Accra, the capital, 521,900.
Government: *Chief of State*—Lt.-Gen. Joseph A. Ankrah (took office Feb. 24, 1966); National Liberation Council, 8 members.
Religious Faiths: Tribal religions, 62% of population; Christians, 24%; Muslims, 14%.
Education: *Total school enrollment* (1964)—1,414,954 (primary, 1,088,344; secondary, 298,592; teacher-training, 10,203; technical, 13,967; higher, 3,848).
Finance (1967–68 est.): *Revenues,* $404,180,000; *expenditures,* $547,840,000; *monetary unit,* cedi (1.02041 cedi equal U. S. $1 as of July 8, 1967).
Gross National Product (1966): $1,743,420,000.
Economic Indexes (1966): *Industrial production,* 128 (1958=100); *cost of living,* 185 (1958=100).
Manufacturing (1965): Lumber, 450,000 cubic meters.
Crops (metric tons, 1964–65 crop year): Cacao beans (1966–67), 415,600 (ranks 1st among world producers); cassava, 1,229,000; millet and sorghum, 185,000; corn, 173,000.
Minerals (metric tons, 1965): Manganese ore, 603,900; bauxite (1966), 352,800; diamonds, 2,248,000 carats.
Foreign Trade (1966): *Exports,* $170,853,200 (chief exports: cacao, $100,802,800; wood, $20,423,200; manganese, $11,916,800; diamonds, $9,653,000); *imports,* $246,185,800 (chief imports, 1965: nonelectrical machinery, $62,833,000; textile yarn and fabrics, $57,827,000; transport equipment, $43,682,000). *Chief trading partners* (1965): Britain (took 13% of exports, supplied 26% of imports); U. S. (took 18% of exports, supplied 9% of imports); West Germany (took 11% of exports, supplied 9% of imports).
Transportation: *Roads* (1965), 20,629 miles (33,198 km); *motor vehicles* (1965), 39,900 (automobiles, 25,000); *railways* (1965), 589 miles (948 km); *merchant vessels* (1966), 16; *national airline,* Ghana Airways.
Communications (1967): *Telephones,* 35,930; *television stations,* 4; *television sets,* 5,000; *radios* (1964), 555,000; *newspapers* (1965), 3.

PICTORIAL PARADE

GENERAL KOTOKA (*center*), head of Ghana's armed forces, shows evidence in February of alleged plot against the regime. In April he was killed in an attempted army coup.

sponsibilities. The new Executive Council will be responsible for the "general direction and control" of the government, although the National Liberation Council will remain the supreme authority in Ghana. General Ankrah will also be chairman of the Executive Council.

A Center for Civic Education, to be headed by Dr. K. A. Busia, was established on June 7 to prepare Ghana for a return to civilian rule. On July 11, General Ankrah named a 31-member National Advisory Committee, also headed by Dr. Busia, to serve as a "clearinghouse" for the government commissions and to advise the National Liberation Council.

Economy. As part of efforts to strengthen Ghana's economy, the Ghanaian cedi was devalued 30% on July 8, from U. S.$1.40 to 98 cents. To offset resultant higher prices, the country's cocoa farmers were promised a 30% price increase, and the daily minimum wage was increased by 5%.

At talks held in Paris in April under the auspices of the International Monetary Fund, Ghana reached agreements to renegotiate its external debts with France, West Germany, Italy, the Netherlands, Britain, and the United States.

A balanced budget for 1967–68 was presented on August 4, with estimated expenditures of $547,840,000 and estimated revenues of $404,180,000; the difference was to be made up by foreign loans.

Over 900,000 persons attended Ghana's First International Trade Fair, which was held in Accra from February 1 to 20. Thirty-one nations and 2,000 firms participated.

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GIBRALTAR. See COMMONWEALTH OF NATIONS.

GOLD

World production of gold in 1966 increased for the 13th consecutive year. Output amounted to 47.1 million fine (troy) ounces, valued at $1.65 billion.

The increase of 0.4 million ounces in a year was derived partly from the continued expansion of South African mines, which contributed 30,879,700 ounces, or about 64.5% of the estimated world gold production. The United States, the USSR, and the Philippines also registered gains.

U. S. MINE PRODUCTION OF RECOVERABLE GOLD
(In troy ounces)

State	1963	1964	1965	1966
Alaska	99,573	58,416	42,249	27,325
Arizona	140,030	153,676	150,431	142,528
California	86,867	71,028	62,885	64,764
Colorado	33,605	42,122	37,228	31,915
Idaho	5,477	5,677	5,078	5,056
Montana	18,520	29,115	22,772	25,009
Nevada	98,879	90,469	229,050	366,903
New Mexico	7,805	6,110	9,641	9,295
Oregon	1,809	661	499	281
South Dakota	576,726	616,913	628,259	606,467
Tennessee	137	133	122	141
Utah	285,907	287,674	426,299	438,736
Washington[1]	98,638	94,308	90,674	85,000
Other	37	6	3	
Total output	1,454,010	1,456,308	1,705,190	1,803,420
Total value	$50,887,000	$50,971,000	$59,682,000	$63,119,700

[1] Includes Pennsylvania. (Source: U.S. Bureau of Mines.)

In the first six months of 1967, South Africa's output was 15,300,000 ounces. Gold production in Canada for the first seven months of 1967 dropped to 1,769,030 ounces, compared with 1,963,870 ounces in the same period of 1966. (See also MINING.)

U. S. refinery production of gold in 1966 rose to 1,801,600 ounces, an increase over the 1,675,000 ounces refined in 1965. Placer mining operations declined in Alaska and increased in California. Output of by-product gold was down in Arizona and up in Montana. Production increased substantially in Utah and Nevada.

In the first eight months of 1967, the gold mines in the United States totaled about 1,102,593 ounces, compared to 1,126,178 ounces in the same period in 1966. Net sales of gold for industrial, professional, and artistic use in the United States in 1966 totaled 6,062,100 ounces, valued at $212,173,500.

BERENICE B. MITCHELL
U. S. Bureau of Mines

GOLF. See SPORTS.

GRAINS

Production of the four major livestock feed grains in the United States in 1967 was 11% greater than in 1966 and 20% above the 1961–65 average, establishing a new record.

For human consumption, American farms increased their output of wheat, rye, and rice 15% in 1967. A sharp increase in winter wheat production was responsible for the increase in food grain.

Feed Grains. The output of the major livestock feed grains—corn, oats, barley, and sorghum—totaled 175,100,000 tons in 1967, compared with 157,183,000 tons in 1966. The nation's feed grain supply included 37,000,000 tons carried over from preceding years.

The composite feed grain yield of 1.74 tons per acre was up from both the 1.61 ton yield of 1966 and the 1.44 ton yield of the 1961–65 average. Production was down 6% for barley, down 2% for oats, up 15% for a record corn crop, and up 7% for sorghum. Feed grain acreage harvested was 3% more than in 1966.

To obtain government payments, farmers diverted an estimated 30,000,000 acres from corn and grain sorghum production for 1968, compared with 22,500,000 acres in 1967.

WORLD PRODUCTION OF GRAINS BY LEADING COUNTRIES
(In metric tons)

	Average 1960–64	1966	1967[1]
Wheat:			
USSR	50,000,000	80,000,000	...
United States	33,254,000	35,670,000	41,996,000
China, Communist	20,700,000	20,100,000	...
Canada	14,649,000	22,517,000	14,900,000
France	11,746,000	11,297,000	14,103,000
ndia	10,809,000	10,720,000	11,500,000
Australia	8,298,000	12,570,000	12,250,000
taly	8,250,000	9,406,000	9,100,000
Argentina	7,164,000	6,380,000	...
Turkey	6,980,000	8,200,000	9,000,000
Germany, West	4,731,000	4,533,000	5,717,000
Spain	4,120,000	4,813,000	5,400,000
Pakistan	4,065,000	3,971,000	4,400,000
Rumania	3,823,000	5,200,000	...
Rye:			
USSR	13,300,000	12,000,000	...
Poland	7,405,000	7,791,000	...
Germany, West	3,225,000	2,696,000	3,192,000
Germany, East	1,784,000	1,642,000	...
Czechoslovakia	911,000	784,000	...
United States	827,000	709,000	610,000
Turkey	672,000	780,000	825,000
Argentina	474,000	270,000	...
Denmark	418,000	139,000	106,000
Austria	401,000	363,000	385,000
Corn:			
United States	94,562,000	104,224,000	119,287,000
China, Communist	11,580,000	...	...
Brazil	10,112,000	12,400,000	...
USSR	9,564,000	6,800,000	6,000,000
Mexico	6,064,000	8,200,000	8,500,000
Rumania	5,784,000	8,022,000	7,400,000
Yugoslavia	5,664,000	7,980,000	6,500,000
South Africa	5,147,000	9,888,000	...
Argentina	4,984,000	8,510,000	...
India	4,402,000	4,991,000	5,500,000
Oats:			
United States	14,496,000	11,584,000	11,694,000
USSR	6,559,000	7,500,000	6,800,000
Canada	6,127,000	5,778,000	4,647,000
Poland	2,700,000	2,700,000	2,600,000
France	2,620,000	2,578,000	2,629,000
Germany, West	2,211,000	2,340,000	2,719,000
Britain	1,705,000	1,120,000	1,392,000
Sweden	1,249,000	1,154,000	1,354,000
Australia	1,228,000	1,502,000	...
Germany, East	900,000	703,000	760,000
Barley:			
USSR	16,117,000	24,000,000	24,200,000
United States	8,831,000	8,481,000	8,130,000
France	6,231,000	7,421,000	9,550,000
Britain	5,891,000	8,950,000	9,276,000
Canada	3,743,000	6,558,000	5,394,000
Germany, West	3,433,000	3,869,000	4,734,000
Turkey	3,310,000	3,500,000	4,000,000
Denmark	3,241,000	4,141,000	4,467,000
India	2,630,000	2,377,000	2,449,000
Spain	1,893,000	2,183,000	2,630,000
Rice:			
India	53,105,000	46,500,000	47,000,000
Pakistan	16,539,000	17,741,500	16,424,400
Japan	15,920,500	15,511,000	15,931,200
Indonesia	13,171,000	15,300,000	14,100,000
Thailand	8,960,000	9,587,600	11,845,500
Burma	7,925,000	8,055,000	7,350,000
Brazil	5,951,200	6,600,000	6,800,000
Vietnam, South	5,055,800	...	...
Korea, South	4,693,600	4,767,400	5,336,800
Philippines	3,883,400	4,072,500	4,165,000
United States	2,887,300	3,460,100	3,858,300
Taiwan	2,801,800	3,063,500	3,135,000

[1] Preliminary estimates for Northern Hemisphere countries; for Southern Hemisphere countries, preliminary forecasts are based largely on acreage and weather conditions. Years shown refer to harvests in Northern Hemisphere. Harvests in Southern Hemisphere come early in the following year. [2] Excluding Communist areas. (Source: Foreign Agricultural Service, U.S. Department of Agriculture.)

The use of feed grains increased steadily from 1957 to a peak of 154,000,000 tons in 1961. Use reached 170,400,000 tons in the 1965–66 marketing year (a record), and 162,600,000 tons in 1966–67.

The national average price support per bushel produced in 1967 was $1.35 for corn, 90 cents for barley, and 63 cents for oats. The rate for sorghum grains was $2.14 per hundredweight. Under the Food and Agriculture Act of 1965, the voluntary price-support and acreage-diversion programs in effect since 1961 were continued through 1969. An important change in the 1968 feed grain program was the reinstatement of voluntary acreage diversion for payment provisions for corn and sorghum.

Food Grains. Total production of wheat, rye, and rice for human consumption reached 50,900,000 tons in 1967, up from 44,380,000 tons in 1966 and one fourth more than the 1961–65 annual average. Production of winter wheat, the main food grain, was a record 1,212,000,000 bushels.

Wheat. The Food and Agriculture Act of 1965 extended the voluntary wheat acreage reduction and marketing-certificate program through 1969. However, the 1967–68 wheat program did not require diversion of wheat acreage and provided no cash payment for doing so. The other incentives were offered producers who planted within their acreage allotments.

The U. S. crop of 1,524,000,000 bushels of wheat in 1967 was 67,000,000 bushels above the previous record for the crop, set in 1958. The 1967 all-wheat acreage allotment was increased to 68,200,000 acres, with no acreage diversion provisions. This encouraged farmers to plant 25% more acreage of wheat. Acres planted to wheat totaled 68,000,000, the highest since 1953. Growers harvested 59,000,000 acres, 18% above 1966 and 23% above the 1961–65 average.

Rye. The U. S. rye crop of 24,100,000 bushels in 1967 was 13% below the 1966 crop and 26% below the 1961–65 average. Acres harvested for grain totaled 1,072,000, down 16% from 1966. The yield per acre was 22.5 bushels, within a fraction of the 1965 record of 22.6 bushels. The 1967 world crop was 32,700,000 metric tons or 1,288,000,000 bushels.

Rice. U. S. production of rice in 1967 set a record for the sixth consecutive year. The rough rice crop totaled 89,600,000 bags (of 100 pounds each), or 5% above the previous year's record of 85,020,000 bags and well above the 1961–65 average. Yields averaged a record 4,550 pounds per acre—228 pounds more than in 1966. Acreage harvested was 1,970,100, about the same as in 1966. The 1966–67 world crop was 163,000,000 metric tons.

Corn. Production of corn for grain in the United States in 1967 totaled a record 4,700,000,000 bushels. The average yield of 78.2 bushels also established a new record. The world corn crop—an all-time record—was 235,860,000 metric tons, or 9,285,300,000 bushels.

Oats. The 1967 U. S. oats crop was the smallest crop since 1934. The crop totaled 782,000,000 bushels, 2% less than in 1966 and 18% below the 1961–65 average. The 16,000,000 acres harvested for grain was the smallest since 1879. World production in 1967 was 43,850,000 metric tons or 3,020,700,000 bushels.

Barley. The 1967 barley crop in the United States dropped to 370,000,000 bushels, 6% below the 1966 figure and 7% below the 1961–65 average. The 1967 yield per acre was 40.3 bushels, close to the 1965 record of 42.9 bushels. World production in 1967 was a record 104,960,000 metric tons or 4,820,800,000 bushels.

Sorghum Grain. U. S. sorghum grain production in 1967 totaled 766,000,000 bushels, setting a record high for the third consecutive year. This was 7% above the 1966 output and 14% above 1965. The average yield per acre, 50.7 bushels, was below the 1966 record of 55.8 bushels. Sorghum grain was harvested from 15,100,000 acres, 18% more than in 1966 and 25% above the 1961–65 average.

(See also AGRICULTURE.)

WILLIAM WHYTE
U. S. Department of Agriculture

GREAT BRITAIN

PICTORIAL PARADE

SIR FRANCIS CHICHESTER was knighted by Queen Elizabeth at the Royal Naval College in Greenwich, July 7, following his solo voyage around the world.

GREAT BRITAIN

The chronic economic problems created by a continuing balance of payments deficit in Britain came to a head in November 1967, causing a financial crisis that resulted in devaluation of the pound accompanied by stringent supportive measures.

GOVERNMENT AND ECONOMY

The popularity of the Labour government of Prime Minister Harold Wilson declined sharply as its harsh economic policies failed to achieve their desired goal of a favorable balance of payments.

Elections. The waning popularity of the government was demonstrated in the by-elections that took place in 1967. Of 11 seats contested before the end of November, Labour lost 4 to the Conservatives and one to a Scottish Nationalist, and its vote was substantially reduced in the other 6 contests.

Cabinet Changes. A number of ministerial changes were announced on January 6. The most important was the appointment of Patrick Gordon Walker as minister without portfolio. Gordon Walker, a former foreign secretary who lost office as a result of defeat at the polls, had returned to the House of Commons in 1966. Minor changes also took place on February 15 and 16, March 31, and July 25.

A major reorganization took place on August 28 when the Prime Minister assumed direct responsibility for the department of economic affairs. Michael Stewart, who remained in the cabinet as first secretary of state, lost his post of secretary of state fo economic affairs to Peter Shore. Anthony Crosland became president of the board of trade; Patrick Gordon Walker succeeded him as minister of education and sciences; and George Thomson entered the cabinet as secretary of state for Commonwealth affairs. Several lesser changes took place on the same date and on September 2. On November 29 in the wake of the devaluation, James Callaghan until then chancellor of the exchequer, and Roy Jenkins, the home secretary, exchanged posts.

Leadership Changes. Jo Grimond, the leader o the Liberal party for a decade, resigned on January 17. The next day the party's 12 members of Parliament elected Jeremy Thorpe. Thorpe, a 37-year-old bachelor from Devon, is noted for political independence and an aggressive political style.

Direct Government Controls. At the beginning o the year the government relaxed the virtual freeze

SPEECH ON DEVALUATION by Prime Minister Harold Wilson receives careful consideration by Sir Leslie O'Brien, governor of the Bank of England.

PICTORIAL PARADE

on wages and prices that it had imposed under the authority granted to it in July 1966 by the Prices and Incomes Act. In July 1967 a second Prices and Incomes Act became law. It gave the government year-long power to delay wage and price increases up to seven months.

The government also relaxed controls on installment buying during the spring and summer, and the Bank of England reduced the bank rate from 7% to 6½% on January 26, to 6% on March 16, and finally to 5½% on May 4.

The initial success of the government's austerity program was demonstrated in a report published on August 31 by the National Board of Prices and Incomes. The report showed that export prices rose by less than 1% between July 1966 and May 1967, retail prices by less than 3%, and average earnings by only 2%. However, the favorable effects of the anti-inflationary measures on Britain's balance of payments failed to develop. On July 24, Callaghan reported to the House of Commons that exports had not expanded as anticipated and that imports had risen considerably in the first half of the year. On October 19 the bank rate was returned to 6% to stem an outflow of funds, and by the second week of November rumors of devaluation were circulating widely. Spectators mounted a severe attack on the pound, and on November 18 the government announced that it was devaluing the pound from U. S.$2.80 to $2.40, or 14.3%. (All sterling figures in this article are converted at the new rate of $U. S. $2.40 to the pound.)

Domestic measures in support of devaluation included raising the bank rate to 8%; limiting the amount of bank credit available to all but exporters and other priority borrowers; tightening installment buying controls on cars; increasing the corporation tax from 40% to 42½%; withdrawing the selective employment tax rebate from all manufacturers except those in development areas; and terminating the 2% corporate tax rebate paid to exporters. The government also proposed to cut public spending by $960 million, including cuts of $240 million in defense spending and $240 million in capital outlays for nationalized industries.

The government forecast that its harsh measures would reduce domestic spending in the private sector by between $1.8 billion and $1.9 billion and create balance of payments surpluses of $480 million in 1968 and $1.2 billion in 1969. To sustain

GREAT BRITAIN • Information Highlights

(All sterling figures in this table have been converted at a rate of $2.80 to the pound.)

Area: 93,605 square miles (242,437 sq km).
Population: 54,744,000 (June 30, 1966, est.).
Chief Cities (June 30, 1965, est.): London, the capital, 7,948,270 (metropolitan area); Birmingham, 1,102,660; Glasgow (1964 est.), 1,018,582; Liverpool, 722,010.
Government: Queen—Elizabeth II; *Prime Minister*—Harold Wilson (took office Oct. 16, 1964). *Parliament*—House of Commons, 630 members (party seating, 1967: Labour, 363; Conservative, 253; Liberal, 12; others, 2); House of Lords, 975 members.
Religious Faiths: Anglicans, 55% of population; Roman Catholics, 8%; Presbyterians, 3%; Methodists, 2%; Jews, 1%.
Education: *Total school enrollment* (1964)—10,772,408 (primary, 5,306,821; secondary, 3,557,634; technical, 1,522,701; higher. 385,252).
Finance (1966 est.): *Revenues*, $28,081,200,000; *expenditures*, $25,643,600,000; *public debt* (1965), $85,234,800,000; *monetary unit*, pound (0.3571 pound equals U. S.$1; as of Nov. 18, 1967, 0.416667 pound equals U. S.$1).
Gross National Product (1966): $104,748,000,000.
National Income (1966): $82,880,000,000 average annual income per person, $1,515.
Economic Indexes (1966): *Industrial production*, 133 (1958=100); *agricultural production* (1965), 137 (1956–57=100); *cost of living*, 126 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 24,708,000; cement, 16,752,000; gasoline (1965), 9,552,000; wheat flour, 3,708,000; meat, 2,024,400; plastics, 1,016,400.
Crops (metric tons, 1966): Barley, 8,950,000 (ranks 2d among world producers); sugar beets (1965), 6,813,000; potatoes, 6,580,000; wheat (1967), 3,560,000; oats, 1,160,000; cooking apples, 438,000; tomatoes (1965), 78.000.
Minerals (metric tons, 1965): Coal (1966), 177,372,000 (ranks 3d among world producers); iron ore (1966), 13,776,000; salt, 6,998,500; gypsum, 4,455,000.
Foreign Trade (1966): *Exports*, $14,661,000,000 (chief exports, 1965: nonelectrical machinery, $2,606,000,000; motor vehicles, $1,585,000,000; electrical machinery, $926.600,000; textile yarn and fabrics, $768,300,000); *imports*, $16,671,000,000 (chief imports, 1965: crude and partly refined petroleum, $1,208,000,000; nonelectrical machinery, $1,038,000,000; nonferrous metals, $1.029.000,000). *Chief trading partners* (1965): U. S. (took 10% of exports, supplied 12% of imports); Canada (took 4% of exports, supplied 8% of imports); West Germany (took 5% of exports, supplied 5% of imports).
Transportation: *Roads* (1965), 201,023 miles (323,506 km); *motor vehicles* (1965), 10,958,533 (automobiles, 9,131,075); *railways* (1965), 15.319 miles (24,648 km); *merchant vessels* (1966), 1,985 (19,952,000 gross registered tons); *national airlines*, BOAC, BEA; *principal airports*, Belfast, Birmingham, Glasgow, Liverpool, London, Manchester.
Communications: *Telephones* (1967): 11,376.000; *television stations* (1967), 137; *television sets* (1967), 15.200,000; *radios* (1965), 16,194,000; *newspapers* (1965), 110 (daily circulation, 26,100,000).

PICTORIAL PARADE

PRINCE CHARLES began his first term as a student at Trinity College, Cambridge University, in October 1967.

the pound in the meantime, overseas central banks agreed to extend about $3 billion in fresh credit. (See also INTERNATIONAL FINANCE.)

Taxation. The 1967–68 budget, introduced on April 11, contained neither major tax innovations nor new incentives for industrial investment, the theory being that as the year progressed the economy would begin to pick up speed. While income and sales rates were unchanged, deductions for dependent relatives and allowances for widows, widowers, and other people with sole responsibility for dependent children were raised.

Total government income for 1966–67 was $24,699,000,000—$576,000,000 less than the budget estimate. Expenditures of $22,682,000,000 were $166,200,000 more than estimated. April budget estimates for 1967–68 forecast revenues of $28,090,000,000 and expenditures of $26,551,000,000. Projected major outlays included $5,570,000,000 for defense, $2,810,000,000 for health and welfare, $3,691,000,000 for economic services, $780,000,000 for education.

Balance of Payments. Britain's gold and hard currency reserves totaled $2,428,000,000 on June 30, 1967, compared with $2,656,800,000 on Dec. 31, 1966, and $2,808,000,000 on June 30, 1966.

Reserves had increased each month from January until May 1967, when repayment of $415,200,000 to the International Monetary Fund caused them to fall. In June, service payments on loans combined with the first costs of the Middle East crisis reduced Britain's reserves $103,200,000 more. By November Britain's reserves would have fallen to less than $1 billion had not the government disposed of $489,600,000 worth of government-held securities in the United States and added their value to the reserve account. With that addition the reserves totaled $1,223,000,000 on November 30.

Support arrangements negotiated with European banks and the Bank of International Settlements in June 1966 were renewed on March 13, and a consortium of Swiss banks provided Britain with a loan of $90 million at 5½% interest on October 10. On November 29, after the devaluation of the pound, a standby loan of $1.4 billion was arranged with the International Monetary Fund.

Foreign Trade. The pattern of British trade in 1967 was disrupted by the Middle East crisis—particularly by the closing of the Suez Canal—and by dock strikes that held up exports, notably in London and Liverpool, from October 2 to November 27. But even in the first half of the year, before the disruptions began, the average monthly gap between visible imports and exports was $50.8 million. Although the average fell to $43.2 million over an 8-month period, the actual gap had risen to $256.8 million by October. Exports during the first nine months of 1967 totaled $9.3 billion. Imports totaled $11.4 billion, and reexports $327.8 million.

Britain's trade gap in 1966 had been estimated at $345 million, compared with $662 million in 1965. In the last quarter of 1966 an average monthly surplus of $67.2 million had been achieved.

Production. During the first eight months of 1967, British industrial production showed no increase, mainly as a result of the government's anti-inflationary policies. Unemployment, which had reached a peak of 2.5% in January, fell to 2.1% in June and July, rose again to 2.4% in August, September, and October, and returned to 2.5% in November.

Industrial production as a whole rose 1% in 1966. However, steel output, at 24.3 million tons, was 10% below the record level of 1965. Output of passenger cars fell by 7%, but engineering and electrical products rose by 5.5% and machine tool deliveries by 5%.

Industrial Power Development. The average daily output of electricity generated by nuclear reactors in Britain in 1966 was 51.8 million kilowatt hours, equivalent to about 10% of Britain's daily output from all sources. In 1966–67 the atomic energy authority's expenditure on civil nuclear research and development amounted to $121 million, $26.4 million of which was capital expenditure. Foreign users ordered $6.2 million worth of power from the authority, and purchasers of radioisotopes spent $6 million.

The first samples of North Sea gas reached points on the east coast of Britain in March 1967, and actual sales began at the end of July. The supply will be extended to northern and southwestern England by 1969 and to Wales and Scotland by 1970.

On November 14 the government announced a series of long-term policy decisions designed to extract the maximum benefit from the introduction of nuclear power and natural gas. The principal decision was to eliminate 35,000 jobs a year to 1970 in the nationalized coal industry. On the same day the government announced that it would extend about $364 million in aid to the areas most seriously hurt.

DOMESTIC AFFAIRS

The government was able to carry out much of its domestic program despite criticism that parts of the program, especially those relating to social welfare, were a luxury the nation could not afford.

Steel. The government's promised renationalization of Britain's steel industry was completed in 1967. On July 28 the assets of the country's steel-producing companies were vested in the British Steel Corporation under the provisions of the Iron and Steel Act of 1967, which became law on March 22

PICTORIAL PARADE

DUKE AND DUCHESS of Windsor, in a ceremony held at Marlborough House in June, made their first public appearance with Queen Elizabeth since his abdication.

Defense. The annual defense review, published on February 16, was essentially a progress report on what had been accomplished in reducing expenditures to relieve the strain on the balance of payments. Estimates for 1967–68 showed a reduction of $108 million over 1966–67, to $5.29 billion.

A second statement on defense, published on July 18, detailed further plans for reductions of overseas forces and marked the end of the major review of defense policy begun in 1964. The statement revealed plans to reduce manpower in the armed forces by 37,000 to a total of 380,100 by April 1971 (Royal Navy, 88,400; Army 181,200; and Royal Air Force, 110,500). About 30,000 British civilian employees and 50,000 local employees overseas will also be cut, and research expenditures will be reduced $72 million. A further planned reduction of $240 million in defense outlays in the 1968–69 budget was announced on November 23 in the crisis immediately following the devaluation.

On Jan. 16, 1968, the government canceled plans to buy 50 U. S. F-111 swing-wing military aircraft and announced that Britain would recall all of its forces east of Suez by the end of 1971. Britain's action prompted the United States to announce at the end of January that it was reviewing its planned defense spending in Britain.

In February 1967, the distribution of British armed forces was as follows: United Kingdom, 243,300; Europe, 63,460; Mediterranean and Near East, 20,300; Middle and Far East, 72,560; elsewhere, 43,290.

Crime. The most notable of a series of large and elaborately planned gang robberies in the London area was staged at the London Cooperative Society's headquarters at Stratford on the weekend of November 11–12. Gangsters forced the vault and escaped unnoticed with an estimated $2.4 million. Crimes of violence continued to increase. The number of convictions for such offenses in Britain rose from 1,583 in 1938 to 16,036 in 1966.

Royal Family. Queen Elizabeth ended two longstanding taboos in 1967. On February 9 she received Soviet Premier Aleksei N. Kosygin for dinner at Buckingham Palace. The occasion was the first on which a British monarch had entertained a Soviet premier. On June 7 the Queen joined the Duke and Duchess of Windsor for the dedication of a memorial to Queen Mary in London. The reunion marked the end of 30 years of family ostracism of the Duke and his twice-divorced wife.

On a state visit to Canada from June 29 to July 5, the Queen and Prince Philip attended Canadian Centennial celebrations and visited Expo 67. On September 20, Elizabeth christened Britain's newest luxury liner, the 58,000-ton *Queen Elizabeth II*, at Clydebank, Scotland.

Prince Charles entered Cambridge University on October 8. Before his investiture as Prince of Wales on July 1, 1969, Charles will spend a term in Wales at University College, Aberystwyth, studying Welsh history and language.

Education. Total expenditure on education in Britain in 1965–66 was $4.3 billion, representing 5.5% of the gross national product. There were 8.4 million students in state-aided secondary schools in January 1966 and 189,500 students—about 26% of them women—at universities that fall. A committee to plan the University of the Air, with instruction by television, was formed in September.

Health and Welfare. Expenditure by the central and local governments in England and Wales on health and welfare services was estimated at $3,300,000,000 in 1966–67, compared with $2,980,000,000 in 1965–66. Central government estimates for 1967–68 total $2.8 billion. The total number of doctors in the medical services fell by 188 to 21,315 during the year ending Oct. 1, 1966, but the number of British students graduating from medical schools in 1966 rose by 130 to 1,750.

The number of prescriptions dispensed in 1966 in England and Wales rose by 7.2% over 1965 to just less than 262 million, costing about $331 million. At the end of 1966 the total number of hospital beds, 468,295, was 1,468 less than in 1965. Nursing staff in 1966 was at an all-time high of 184,212 full-time and 74,463 part-time nurses and midwives. The estimated expenditure on hospital building in 1966–67 was $180 million.

Social Security. Higher social security benefits were announced on June 21. The new basic rates of unemployment and sickness benefits and widows' and retirement pensions were $11.80 a week for single persons and $17.52 for married couples.

Transportation. Britain's nationalized railroads incurred a working deficit of $171.8 million in 1966, some $3.6 million less than in 1965. Gross receipts from total traffic amounted to $1.1 billion, and capital expenditure totaled $256.3 million. A $448 million electrification program was completed on March 6 with the introduction of new, fast passenger service between London and Birmingham, Wolverhampton, Coventry, and Stoke-on-Trent. Electrification of the system in southeast England between the Thames and the south coast was completed in July.

British Overseas Airways Corporation (BOAC) carried more than 1.5 million passengers and made a record profit of $57.4 million in 1966–67. British European Airways (BEA) made a profit of $1.7 million in the same year.

A final decision to build a third major airport for London at Stanstead, Essex, in spite of strong local opposition, was announced on May 12.

The Cunard liner *Queen Mary* was sold to Long Beach Calif., for $3.4 million on July 26. The *Queen Mary* and *Queen Elizabeth*, which will also be sold, will be replaced by the *Queen Elizabeth II*.

***Torrey Canyon* Disaster.** Britons spent several days in March defending the beaches of Cornwall and Devon from tons of floating crude oil that escaped from the tanker *Torrey Canyon* and floated toward shore. The ship, owned by the Union Oil Company of California, ran aground off Land's End on March 18 and, after disgorging most of its cargo from its slowly disintegrating hull, was finally destroyed by British bombers on March 28–30. Despite well-organized efforts to prevent the sludge from ruining resort beaches in the area, damage was severe.

Foot-and-Mouth Epidemic. A severe epidemic of foot-and-mouth disease, which broke out on October 25 in northwest England, caused losses estimated at $60 million to British farmers and occasioned the slaughter of more than 250,000 animals by mid-December. Horse racing, sports events, and agricultural shows were cancelled, and the movement of livestock was controlled or prohibited throughout Britain.

Death of Attlee. Former Prime Minister Clement Attlee died in London on October 8. (See ATTLEE.)

FOREIGN AFFAIRS

Foreign Affairs in 1967 were dominated by the government's efforts to join the European Economic Community (Common Market).

European Economic Community. On May 10, Britain applied for membership in the EEC, the European Coal and Steel Community (ECSC), and the European Atomic Energy Community (Euratom). The application followed a series of exploratory talks by Prime Minister Wilson and chiefs of the six EEC member states. The Prime Minister and Foreign Secretary George Brown visited Rome on January 15–17, Paris on January 23–25, Brussels on January 31–February 1, Bonn on February 14–16, The Hague on February 26–27, and Luxembourg on March 7–8.

The principal problems in entering the market from Britain's standpoint were set out in detail by Wilson in a speech to the House of Commons on May 8 and by other ministers on May 9 and 10. The problems concern the common agricultural policy of the EEC countries and its effect on Britain's government-supported agriculture and British retail food costs; means of safeguarding the interests of Commonwealth countries; and the preservation of the purpose of British regional policies designed to ensure industrial and social development of depressed domestic areas.

Britain's application was considered by the EEC council of ministers and referred, on June 26, to the European Commission, which reported favorably on September 29. The chief obstacle to British admission, as in 1961–62, when a Conservative government applied, appeared to be the policy of French President Charles de Gaulle, as he outlined it at press conferences on May 16 and November 27. On May 16 de Gaulle limited his statement to an expression of the problems as he saw them, but on November 27 he raised a variety of objections that amounted almost to a veto. In a speech at a parliamentary press gallery lunch on November 29, however, Prime Minister Wilson reinforced the government's statement of the previous day that the British application would not be withdrawn, and he replied in detail to President de Gaulle's objections to British membership.

Commonwealth Affairs. The major problems in Rhodesia and South Arabia (Aden) continued to complicate Commonwealth affairs during the year. At the end of the year a solution in Rhodesia seemed as remote as it had been at the beginning. A mission undertaken in June by Lord Alport, a former British high commissioner in the Federation of Rhodesia and Nyasaland, to assay prospects for successful negotiations with the rebel government of Prime Minister Ian Smith, offered hope of a solution at the time. But in the view of the British government a number of points raised by Smith needed clarification before any progress could be made. George Thomson, secretary of state for Commonwealth affairs, who visited Salisbury on November 8 and 9, submitted very gloomy reports to the House of Commons on November 14 and December 13.

Britain's problems in South Arabia were resolved late in the year. On September 5, Britain recognized the National Liberation Front as representative of the people. On November 14, Foreign Secretary Brown announced that British forces would be withdrawn by the end of the month. Final details of South Arabian independence were worked out in a conference with the Front at Geneva on November 21–29. The British high commissioner, Sir Humphrey Trevelyan, left Aden on November 28, and South Arabia became independent on November 30.

United States. Relations with the United States during the year were outwardly uneventful. There was considerable criticism in Britain of U. S. actions in Vietnam, but the government supported the American position while seeking to facilitate a political settlement on the basis of the Geneva accords.

Disturbances erupted in Britain, however, when the U. S. Senate, on September 13, adopted an amendment to the Defense Appropriations Act providing that no U. S. naval vessels could be constructed in foreign yards. The amendment was in-

UPI

QUEEN ELIZABETH II, the new Cunard liner, floats in the River Clyde following her christening and launching at Clydebank, Scotland, on September 20.

terpreted in Britain as a threat to an Anglo-American understanding that the cost of 50 F-111 fighter bombers that Britain had agreed to purchase from the United States would be offset by U. S. defense purchases in Britain. On Jan. 16, 1968, Britain canceled the order in an economy move.

Prime Minister Wilson visited President Johnson in Washington on June 2 in the course of a visit to Canada, the United States, and the United Nations. The principal topic discussed was the crisis in the Middle East.

Soviet Union. The outstanding event in Anglo-Soviet relations during the year was the official visit to Britain of Soviet Premier Kosygin from February 6 to 13. Premier Kosygin and Prime Minister Wilson repeatedly tried to produce a basis for settling the Vietnam war.

A new Anglo-Soviet cultural agreement covering a 2-year period beginning on April 1 was signed in London on February 24.

West Germany. Proposals to offset the greater part of the foreign exchange costs of British forces in West Germany were adopted in negotiations between Britain, the Federal Republic of Germany, and the United States on April 28, and an agreement embodying them was signed on May 5. Britain's contribution to NATO defenses in Germany will be substantially reduced.

France. Despite President de Gaulle's hostility to Britain's Common Market bid, the two countries continued to cooperate in a number of fields, notably in aircraft production. In addition to the Concorde supersonic jet airliner project, which yielded a prototype displayed at Toulouse, France, on December 11, Britain and France agreed in January on the joint development of three new helicopters. Both countries and West Germany are cooperating on development and production of a short-to-medium-haul air bus. (See also AVIATION.)

Communist China. Britain's relations with Communist China were unsettled by anti-British demonstrations in Hong Kong that began on May 1 and continued for several months. On June 26, China protested the treatment of Chinese in the British colony, and on August 14 it protested Britain's retaliatory action in closing the Chinese-Hong Kong frontier.

Following Britain's rejection of both protests, China increased its harassments. Bands of Red Guards sacked the British mission in Peking on August 22 and seized the office of the British representative in Shanghai on September 13.

In retaliation against Chinese maltreatment of British personnel and the Chinese government's refusal to grant them exit permits, Britain placed restrictions on Chinese personnel in London. Britain lifted the restrictions on November 21, and relations were further improved on November 29 when the Chinese adopted reciprocal measures.

Spain. Relations with Spain continued to be complicated by the question of the future of Gibraltar. (See also COMMONWEALTH OF NATIONS.)

RICHARD E. WEBB
British Information Services

MRS. WINIFRED EWING, the first Scottish Nationalist member of Parliament, arrives at the House of Commons.

KEYSTONE

SNP
BANNOCKBURN

KING CONSTANTINE and Lieutenant General Gregory Spandidakis (*left*) crack eggs, a traditional Greek Easter custom, on April 30, nine days after a junta including Spandidakis took control of the government. At the time, Constantine was concerned with preserving a show of political unity.

WIDE WORLD

GREECE

The overthrow of Greek parliamentary government by a military coup on April 21, the King's abortive counter coup against the military leaders on December 13, and the threat of war with Turkey over Cyprus dominated the year 1967 in Greece.

Overthrow of the Government. The government of John Paraskevopoulos, which had been in office since December 1966, resigned on March 30. Failing in attempts to form a coalition government, King Constantine II on April 3 entrusted the formation of a new ministry to Panayotis Kanellopoulos of the National Radical Union. The designation was criticized by the Center Union party, largest in the country, and its leader, George Papandreou, who had resigned as premier in July 1965. Premier Kanellopoulos dissolved the chamber on April 14 and set national elections for May 28.

During the early morning hours of April 21—while Constantine was at his country home, Tatoi, 16 miles (25 km) north of Athens—a take-over of the country was staged by a group of rightist army officers. Leaders were the army chief of staff, Lt. Gen. Gregory Spandidakis, and three junior officers, Brigadier Stylianos Patakos, Col. George Papadopoulos, and Col. Nicholas Makarezos. Prominent political leaders, including Premier Kanellopoulos, Papandreou, and Papandreou's son, Andreas, a former minister, were placed under arrest, while thousands of other persons were deported to Aegean prisons. Andreas Papandreou was subsequently accused of conspiracy to commit treason, but he was released from custody on December 24 and in January 1968 left the country.

The leaders of the coup, who emerged as members of a new government, announced that they had acted to prevent a revolution by Andreas Papandreou and to forestall a Communist seizure of Greece. A civilian, Constantine V. Kollias, chief prosecutor of the supreme court, was named premier. The May elections were canceled.

Though the coup leaders proclaimed their devotion to him, King Constantine was obviously distressed by the destruction of the parliamentary structure of his country. It was he who persuaded the officers to accept Kollias as prime minister. Undoubtedly trying to avoid a bloody civil war, Con-

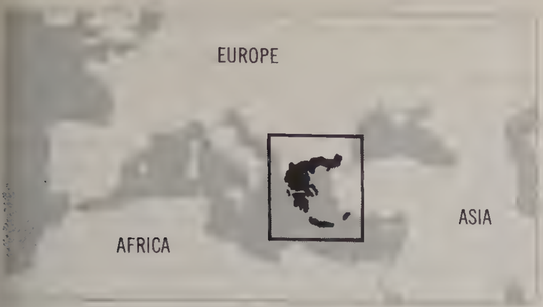
COLONEL GEORGE PAPADOPOULOS (*right*), a key figure in the new Greek government, at a news conference in May.

LONDON DAILY EXPRESS

COL. GEORGE PAPADOPOULOS headed the Greek right-wing military junta that, on April 21, 1967, overthrew the interim government of Premier Panayotis Kanellopoulos, declared martial law, suspended constitutional liberties, and arrested thousands of suspected leftists. Within the new government, which was formally headed by Premier Constantine V. Kollias, Papadopoulos, assuming the office of minister to the premier, retained the main authority. During his early months in power he took steps to reorganize the bureaucracy and the Greek Orthodox Church, to reduce living costs, and to "create a new basis for relations between citizen and state." After King Constantine's flight to Rome in December, Papadopoulos became premier.

Papadopoulos was born in Arakhova, Greece, about 1919. During World War II he fought with Greek resistance forces under George Grivas.

GREECE • Information Highlights



Area: 50,996 square miles (131,944 sq km).
Population: 8,612,000 (July 30, 1966, est.).
Chief Cities (1961 census): Athens, the capital, 627,564; Salonika (Thessaloníki), 250,920; Piraeus, 183,877.
Government: *King*—Constantine II (acceded March 6, 1964); *Premier*—George Papadopoulos (took office Dec. 13, 1967). *Parliament*—300 members (party seating, prior to April 14, 1967: Center Union, 126; National Radical Union, 99; Liberal Democratic Center, 36; United Democratic Left, 22; Independent Center, 9; Progressive, 8). Parliament suspended April 14, 1967.
Religious Faiths: Greek Orthodox, 97% of population; Roman Catholics, 0.4%; Protestants, 0.2%; others, 2.4%.
Education: *Literacy rate* (1961), 80% of population aged 15 and over. *Total school enrollment* (1965)—1,445,666 (primary, 963,846; secondary, 368,884; teacher-training, 4,350; technical, 53,252; higher, 55,334).
Finance (1966 est.): *Revenues*, $1,140,000,000; *expenditures*, $1,080,000,000; *public debt* (1965), $1,142,000,000; *monetary unit*, drachma (30 drachmas equal U. S.$1).
Gross National Product (1966): $5,700,000,000.
National Income (1965): $4,842,000,000; average annual income per person, $566.
Economic Indexes (1966): *Industrial manufacturing production*, 181 (1958=100); *agricultural production* (1965), 157 (1956–57=100); *cost of living*, 119 (1958=100).
Manufacturing (metric tons, 1966): Cement, 3,588,000; wheat flour (1963), 1,010,000; wine (1965), 351,000; gasoline (1965), 312,000; olive oil, 180,000.
Crops (metric tons, 1967): Wheat, 1,850,000; grapes (1965), 1,348,000; barley, 848,000; sugar beets (1965), 669,000.
Minerals (metric tons, 1965): Lignite (1966), 4,836,000; magnesite, 390,500; iron ore, 299,720.
Foreign Trade (1966): *Exports*, $405,959,400 (chief exports: tobacco, $111,622,000; currants, grapes, raisins, $46,295,000); *imports*, $1,221,600,000 (chief imports, 1965: nonelectrical machinery, $177,037,000; ships and boats, $82,194,000; iron and steel, $63,567,000). *Chief trading partners* (1965): West Germany (took 22% of exports, supplied 18% of imports); U. S. (took 9% of exports, supplied 9% of imports).
Transportation: *Roads* (1966), 27,440 miles (44,151 km); *motor vehicles* (1965), 176,589 (automobiles, 103,864); *railways* (1965), 1,616 miles (2,061 km); *merchant vessels* (1966), 952 (7,229,000 gross registered tons); *national airline*, Olympic Airways; *principal airport*, Athens.
Communications: *Telephones* (1966): 508,262; *radios* (1965), 904,000; *newspapers* (1965), 112.

stantine emerged as a moderating influence with the military. On May 21 he announced that a committee would draft a new constitution for the country, and that that this would be submitted to the populace for approval. The committee began its work in June.

Constantine's Counter Coup. After several months, Constantine decided to move against the military regime. On December 13 the King flew to Kaválla, 280 miles (460 km) northeast of Athens, to direct a counter coup. In a recorded proclamation broadcast over a shortwave station at an airbase in Lárisa, he dramatically criticized the military government and appealed for support from the armed forces. Constantine's action, to return Greece to "democratic normalcy," may have been well timed (the government's prestige had suffered from the resolution of the Cyprus crisis in November, and Papadopoulos was scheduled to publish the new constitution in two days), but it failed badly. The king was unable to muster enough support from the armed forces, and early on December 14 Constantine and his family fled to Rome. Premier Kollias accompanied them.

Papadopoulos assumed the post of premier; Lt. Gen. George Zoitakis was appointed regent; and issuance of the constitution was postponed. An amnesty was promised those officers who had sided with the King. The military regime sent envoys to Rome to confer with Constantine on the possibility of his return, but by year-end the king's terms and those of the military government had not been reconciled. On December 20, Papadopoulos, Patakos, and Makarezos retired from the army to give the regime an appearance of civilian rule.

Foreign Affairs. The military seizure of power in April caused widespread criticism outside the country, and the United States limited important military items sent to Greece. The Danish government and Danish public opinion seemed particularly vehement in denouncing the Greek situation. Constantine's wife, Queen Anne-Marie, a Danish princess by birth, did not attend the wedding of her eldest sister in Copenhagen in June; nor did Anne-Marie's parents, the King and Queen of Denmark, attend the baptism of her son, Prince Paul, born on May 20. In November the Greek government announced that imports from Denmark would not be allowed in Greece.

Following Constantine's unsuccessful attempt to overthrow the military regime and his flight, the

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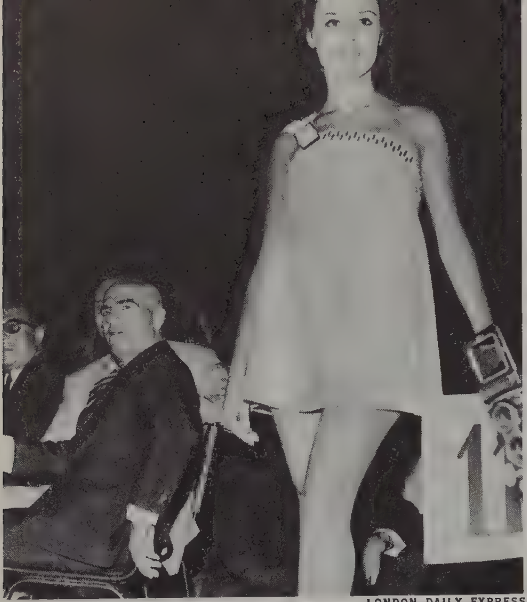
CONSTANTINE II, who became king of Greece upon the death of his father, on March 6, 1964, subsequently was involved in almost continuous political turmoil. His dispute with leftist army officers and liberal forces led by former premier George Papandreou came to a head on April 21, 1967, when a right-wing military junta, claiming it was acting to avert a Communist take-over, staged a coup and instituted martial law. Constantine, who reportedly had no hand in the coup, tried unsuccessfully to unseat the junta on December 13 and fled to Rome.

The son of the late King Paul and of Queen Frederika, Constantine was born at Psykhikon, near Athens, on June 2, 1940. He was trained at the army, navy, and air force academies and at the University of Athens. On Sept. 18, 1964, King Constantine married Princess Anne-Marie of Denmark. He became the father of an heir on May 20, 1967.

AFTER AN UNSUCCESSFUL COUNTER COUP, Constantine arrives in Rome, December 14, with his queen, Anne-Marie.

UPI


LONDON DAILY EXPRESS

MINISKIRTS, first banned by the new regime, eventually won approval from junta member Stylianos Patakos (*left*).

United States and other partners of Greece in the North Atlantic Treaty Organization initially withheld recognition of the regime. British Prime Minister Wilson denounced the junta's "barbarous methods." The sending of envoys from Athens to Constantine in Rome was seen as an attempt to preserve the legitimacy of the monarchy in foreign eyes.

The Cyprus Question. The problem of Cyprus embittered Greek-Turkish relations, as it had in previous years. In September, Premier Kollias and Premier Süleyman Demirel of Turkey met but came to no agreement over the island, whose Greek Orthodox majority favored enosis (union) with Greece. In November, following an attack by Greeks on Turkish Cypriotes, the Turkish government mobilized to invade the island. Diplomatic intervention by the United States, NATO, and the United Nations, along with acceptance by Greece of Turkish demands for withdrawal of Greek troops from Cyprus, quieted the crisis. (See also CYPRUS.)

Economy. The April coup resulted in a decrease in the number of tourists. The Kollias government, however, said that the Greek economy had been strengthened after April by such measures as a lowering of prices and an increase in foreign investments. Heavy summer rains damaged the fig crop, causing a probable 19% drop in output from 1966.

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GREEK ORTHODOX CHURCH. See RELIGION—*Eastern Orthodoxy.*

GUATEMALA

Communist-led guerrilla movements were placed on the defensive in 1967, but a new threat to the constitutional regime of President Julio César Méndez Montenegro arose from right-wing terrorism.

Terrorism. A 3-month state of siege was ended at the close of February and replaced by a state of alarm. The latter suspension of rights was administered by the national police, while the former had been implemented by the military forces. The state of alarm had to be lifted after its abuse by various right-wing extremist groups, who used police uniforms as a cover for their terrorist activities. Threats, tortures, kidnappings, and assassinations continued into May without abating. It was estimated at midyear that rightist terrorism had claimed the lives of more than 1,000 persons, some of whom had little or nothing to do with politics.

Pacification Efforts. Guatemalan bishops announced in May that they could not remain silent while violence and disruption were aggravating the social, moral, and economic problems of the country. They joined Archbishop Mario Casariego in offering to mediate between leftist and rightist groups.

The military forces, with assistance from various ministries, had been given the task of removing leftist guerrillas and pacifying the countryside. That campaign drove many of the irregulars into the capital of Guatemala City. Police were given the responsibility for curbing violence in urban areas. To

GUATEMALA • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 42,042 square miles (108,889 sq km).
Population: 4,646,000 (Dec. 31, 1966 est.).
Chief Cities (1964 prelim. census): Guatemala City, the capital, 572,937; Quezaltenango, 45,195; Escuintla, 24,832; Puerto Barrios, 22,242.
Government: *President*—Julio César Méndez Montenegro (took office July 1, 1966); *Vice President*—Clemente Marroquín Rojas. *Parliament*—Congreso Nacional, 55 members (party seating, 1967: Partido Revolucionario, 31; Partido Institutional Democrático, 19; Movimiento Liberación Nacional, 5.
Religious Faiths: Roman Catholics, 92% of population.
Education: *Literacy rate* (1961), 70% of population aged 10 and over. *Total school enrollment* (1964)—452,198 (primary, 401,070; secondary, 32,746; teacher-training, 5,873; technical, 5,495; San Carlos University, 7,014.
Finance (1966 est.): *Revenues*, $117,000,000; *expenditures*, $145,300,000; *public debt*, $145,800,000; *monetary unit*, quetzal (1 quetzal equals U. S.$1).
Gross Domestic Product (1966): $1,500,000,000.
National Income (1965): $1,247,000,000; average annual income per person, $281.
Economic Indexes (1966): *Industrial production*, 154 (1958=100); *agricultural production* (1965), 173 (1956–57=100); *cost of living*, 100 (1958=100).
Manufacturing (metric tons, 1966): Cement, 204,000; sugar, 156,000; gasoline (1965), 105,000; wheat flour, 65,880; beer (1965), 22,600; meat (1961), 40,000; lumber (1964), 164,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Maize, 805,000; bananas (1964–65), 124,000; coffee (1965–66), 120,000; cottonseed, 115,000; cotton lint, 72,000; dry beans, 51,000.
Minerals (metric tons, 1965): Limestone (1964), 1,071,000; clays (1964), 41,044; quartz (1964), 21,936; salt, 18,140; gypsum, 15,000; iron ore, 8,128.
Foreign Trade (1966): *Exports*, $227,800,000 (chief exports: coffee, $101,000,000; cotton, $44,500,000; bananas, $6,400,000); *imports*, $206,900,000 (chief imports, 1965: nonelectrical machinery, $29,579,000; transport equipment, $22,767,000; textile yarn, fabrics, $21,018,000). *Chief trading partners* (1965): U. S. (took 37% of exports, supplied 42% of imports); West Germany (took 13% of exports, supplied 10% of imports); El Salvador (took 10% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 7,575 miles (12,190 km); *motor vehicles* (1965), 57,919 (automobiles, 46,290); *railways* (1965), 510 miles (821 km); *merchant vessels* (1966), 2 (4,000 gross registered tons); *government airline*, Aviateca; *principal airport*, Guatemala City.
Communications: *Telephones* (1966): 25,000; *television stations* (1965), 2; *television sets* (1965), 55,000; *radios* (1961), 210,000; *newspapers* (1962), 8 (daily circulation, 125,000).

better accomplish its assignment, the multifaceted police operation had to be reorganized and placed under the jurisdiction of the ministry of the government. Plans were announced to add up to 2,000 to the existing police forces.

Although the government was able to diminish terror from leftist groups, the rash of rightist organizations presented authorities with even more danger than they had experienced from the left. Army elements, especially junior officers, were accused of assisting the rightist underground. Observers who feared that the growing turmoil would provoke a military take-over of the country were reassured by Defense Minister Col. Rafael Arriaga Bosque, who insisted that the armed forces would adhere to the constitution. Speaking on Armed Forces Day, June 30, the defense minister appeared to enjoy the support of a major portion of the military establishment in proclaiming the loyalty of the Armed forces.

Political Parties. President Méndez Montenegro presented his annual message to the National Congress and the nation at the outset of a new legislative session that convened in June. His review of the administration's efforts presented the opposition Movimiento Liberación Nacional (MLN) with an opportunity for a partisan attack on the failure of the moderately leftist Partido Revolucionario (PR) to restore peace after one year in office. According to a widely held belief, the rightist MLN was supporting organized terrorist activities.

Economy. Because of unstable political conditions, Guatemala has lagged behind some other Central American economies in attracting foreign investments. A group of 32 Mexican businessmen, however, visited Guatemala in June to study its investment climate and the possibility of joint ventures with local capital.

A new industrial and agricultural finance company was started with an initial capital of $6.8 million. The formation of the finance unit, which will be a part of the Central American Bank of Economic Integration, was made possible through a $5 million loan from the U. S. Agency for International Development and the participation of 84 Guatemalan businessmen.

Thousands of new houses were constructed in 1967, financed by an $11 million fund made up of loans from the Inter-American Development Bank and Guatemalan public funds, as well as contributions from the intended occupants of the dwellings. The Méndez Montenegro administration also built schools and expanded faculties.

Cultural Award. In October, novelist Miguel Angel Asturias was awarded the Nobel Prize for literature. The 68-year-old Asturias is the Guatemalan ambassador to France. (See also NOBEL PRIZES.)

LARRY L. PIPPIN

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GUINEA

Guinea celebrated in May 1967 the 20th anniversary of the Parti Démocratique de Guinée (PDG) and the 10th anniversary of a Guinean government. Such celebrations, however, could not disguise the growing isolation of President Sékou Touré from the mainstream of West African development.

On May Day, Touré demanded the "total Africanization" of the Christian churches in Guinea. He denounced the Roman Catholic and Protestant churches for their slowness in training an African clergy and ordered all foreign clergymen to leave Guinea by June 1. Despite high-level conferences and strong protests, the deportation order, which mainly affected French nationals, was carried out. The action was a further example of Guinea's fear of European domination—a fear that accounts for Guinea's negative attitude toward regionalization, the Organisation Commune Africaine et Malgache, and any association of French-speaking Africa.

Foreign Relations. In response to an appeal by Prime Minister Sir Albert Margai of Sierra Leone, Guinean troops were sent to the border in February, ostensibly to bolster Margai's position before the scheduled elections. This action, however, instead of strengthening the existing regime helped to create the atmosphere that made possible the military coup in Sierre Leone the following month.

After the extremely provocative actions toward the military regime of Ghana in 1966, Touré modified his position of unqualified support for former Ghanaian President Kwame Nkrumah, who still lives quietly in Guinea.

The antipathy between Guinea and the Ivory Coast that led in 1966 to a brief war scare continued in 1967. An Ivory Coast trawler was seized on February 17 and its personnel interned on the charge of violating Guinean waters. Despite mediation attempts by President William V. S. Tubman of Liberia, Guinea refused to release the captives.

GUINEA • Information Highlights

ASIA
AFRICA

Area: 94,925 square miles (245,857 sq km).
Population: 3,608,000 (July 1, 1966 est.).
Chief Cities (1963 est.): Conakry, the capital, 78,000; Kankan, 25,500.
Government: *President*—Sékou Touré (took office Oct. 28, 1958); *Parliament*—National Assembly, 75 members (all members of the Parti Démocratique de Guinée).
Religious Faiths: Muslims, 61% of population; tribal religions, 37%; Roman Catholics, 0.9%; others, 1.1%.
Education: *Total school enrollment* (1964)—199,042 (primary, 178,270; secondary, 14,133; teacher-training, 559; technical, 4,721; higher, 1,359).
Budget (1967 est.): $167,600,000; *monetary unit*, Guinea franc (246.85 francs equal U. S.$1).
Cost of Living Index (1960), 108 (1958=100).
Manufacturing: Lumber (1963), 18,000 cubic meters.
Crops (metric tons, 1964–65 crop year): Cassava, 450,000; bananas, 87,000; peanuts (1966), 14,512.
Minerals (metric tons, 1966): Iron ore, 600,000; alumina, 525,000; bauxite, 200,000; diamonds (exports, 1965), 72,000 carats.
Foreign Trade (1964): *Exports*, $52,000,000 (chief exports, 1962: alumina, $26,800,000; bananas, $4,500,000; palm nuts and kernels, $3,000,000; raw coffee, $2,900,000); *imports*, $49,000,000 (chief imports, 1962: printed cotton fabrics, $7,200,000; rice, $6,300,000; nonelectrical machinery, $4,800,000). *Chief trading partners* (1964): Communist bloc (took 23% of exports, supplied 40% of imports); France (took 11% of exports, supplied 22% of imports); U. S. (took 9% of exports, supplied 22% of imports).
Transportation: *Roads* (1965), 4,960 miles (7,981 km); *motor vehicles* (1965), 22,300 (automobiles, 14,000); *railways* (1964), 411 miles (661 km); *merchant vessels* (1966), 1 (11,000 gross registered tons); *government airline*, Air Guinée; *principal airports*, Conakry and Kankan.
Communications: *Telephones* (1966): 6,300; *radios* (1965), 75,000; *newspapers* (1965), 1.

On June 27, Ivory Coast authorities retaliated by seizing a group of Guinea diplomats from a Dutch airliner that was forced to make an emergency landing at Abidjan while en route to Conakry, Guinea, from a meeting at the United Nations. Ivory Coast spokesmen stated that such action was necessary to force the release of its citizens held by Guinea. Touré accused the Dutch and the United Nations of complicity and temporarily detained all resident Dutch airline personnel.

Liberia, Mali, Niger, and the United Nations tried to mediate without success. Finally, on September 21, Touré capitulated and released the Ivoirien citizens. Four days later the Guinea diplomats were allowed to leave the Ivory Coast. This confrontation was the year's most dramatic event in the bitter ideological struggle between Guinea and the Ivory Coast, the state Touré regards as a "neocolonial tool" of the French.

Economy. Guinea showed a slower economic growth rate than comparable African states in 1967. It continued, however, to be successful in securing foreign aid. Communist China underwrote the construction of a dam and hydroelectric plant. It also advanced 40-year interest-free loans to Guinea, and financed the new Peoples Palace in Conakry.

In February an agreement was signed that allows the use of Liberia's roads and railroads to import goods into southern Guinea. In March the United States agreed to restore its $25 million per year aid program to the full level existing before the anti-American activities of November 1966. West Germany, in January, granted long-term credits of $750 million for railroad modernization, and in September new agreements were signed with the Soviet Union for increased development funds.

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GUYANA

Disagreements within the governing coalition and between the government and the opposition People's Progressive party marked Guyana's first year of independence (celebrated May 26, 1967).

Internal Affairs. Serious frictions developed in 1967 in Guyana's two-party government coalition. The parties are the People's National Congress, led by Prime Minister Linden Forbes Burnham, and the smaller United Force, led by Finance Minister Peter D'Aguiar. A series of disagreements arose over certain policies, particularly a highly restrictive law on internal security. D'Aguiar resigned his cabinet post in September and was succeeded by Ptolemy Reid, first deputy prime minister and a close associate of Burnham.

The passage of the National Security Act at the end of 1966 provoked a parliamentary walkout by members of the government's militant opposition, the leftist People's Progressive party, led by former prime minister Cheddi Jagan. The new law provided for the preventive detention of persons deemed a threat to public order and severe jail sentences for unlawful possession of firearms and explosives. It also granted extensive "stop and search" powers to the police. The governor-general was empowered to initiate press censorship and deport noncitizens considered politically undesirable.

Foreign Affairs. Prime Minister Burnham assumed regional leadership by advocating in August the extension of Guyana's free-trade arrangement with Barbados and Antigua to other Commonwealth countries in the Caribbean. At a Caribbean conference of heads of government in Barbados in October, an enlarged free trade area was endorsed and steps were taken to establish a Regional Development Bank.

Economy. The government continued to stress economic development with an increasing emphasis on expansion in the agricultural sector. A Youth Corps was initiated for the unemployed between the ages of 15 and 20; members are to live together at a campsite in the interior and take a 2-year training course in vocational skills. To facilitate the projected development of the vast interior, large-scale hydroelectric, forestry, and geological surveys were made by the government.

A sharp decline in Guyana's foreign exchange position in 1966 was caused partly by a widening gap of imports over exports. As countermeasures, the government imposed additional duties on imports and stressed its "buy local" campaign. To stimulate industrial growth, the government in its 1967 budget offered special concessions to overseas investors by extending its initial 5-year tax holiday for another five years and permitting duty-free importation of industrial raw materials.

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Flint College, University of Michigan

GUYANA • Information Highlights

SOUTH AMERICA

Area: 83,086 square miles (214,969 sq km).
Population: 662,000 (July 1, 1966, est.).
Chief Cities (1960 census): Georgetown, the capital, 72,964; New Amsterdam, 14,053.
Government: *Governor-General*—David J. G. Rose (took office Dec. 16, 1966); *Prime Minister*—Linden Forbes Burnham (took office Dec. 15, 1964). *Parliament*—House of Assembly, 53 members (party seating, 1966: People's National Congress, 23; People's Progressive party, 21; United Force, 7; others, 2).
Religious Faiths: Hindus, 33% of population; Anglicans, 20%; Roman Catholics, 15%; Muslims, 9%; others, 23%.
Education: *Literacy rate* (1961), 72% of population aged 15 and over. *Total school enrollment* (1963 and 1964)—169,172 (primary, 1964, 152,839; secondary, 1964, 14,467; technical, 1963, 1,514; higher, 1964, 352).
Finance (1967 est.): *Revenues* (1965), $42,400,000; *expenditures,* $129,000,000; *public debt* (1964), $74,400,000; *monetary unit,* Guyana dollar (1.714 dollars equal U. S.$1).
Gross National Product (1966): $219,204,000.
National Income (1966): $180,823,000; average annual income per person, $271.
Manufacturing: Sugar; beer; lumber.
Crops (metric tons, 1966–67 crop year): Rice, 294,000.
Minerals (metric tons, 1965): Bauxite (1966), 3,348,000 (3rd among world producers); manganese ore, 168,826.
Foreign Trade (1966): *Exports,* $109,000,000 (chief exports: bauxite; unrefined cane sugar; rice; uncut diamonds); *imports,* $118,000,000 (chief imports; machinery and transport equipment; textile yarn; petroleum products). *Chief trading partners* (1965): Britain, U. S., Canada.
Transportation: *Roads* (1964), 879 miles; *motor vehicles* (1965), 13,232; *railways* (1965), 79 miles.

HAITI • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 10,714 square miles (27,750 sq km).
Population: 4,485,000 (July 1, 1966 est.).
Chief Cities (1965 est.): Port-au-Prince, the capital, 151,220; Cap-Haïtien, 27,538; Gonaïves, 15,373.
Government: *President*—François Duvalier (took office for life term, June 22, 1964). *Parliament*—National Assembly, 58 members (all belonging to the Parti Unique de l'Action Révolutionnaire et Gouvernementale).
Religious Faiths: Roman Catholics, 90% of population.
Education: *Literacy rate* (1950), 10.5% of population aged 10 and over. *Total school enrollment* (1964)—302,901 (primary, 276,398; secondary, 18,995; teacher-training, 192; technical, 5,611; university, 1,705).
Finance (1967 est.): *Revenues*, $28,140,000; *expenditures*, $28,140,000; *public debt* (1962), $54,360,000; *monetary unit*, gourde (5 gourdes equal U. S.$1).
Gross Domestic Product (1965): 377,000,000.
Cost of Living Index (1960), 117 (1958=100).
Manufacturing (metric tons): Sugar (1966), 62,000; wheat flour (1965), 53,000; cement (1965), 42,000.
Crops (metric tons, 1966–67 crop year): coffee, 30,000; bananas (1964), 25,000; sisal, 19,026; cocoa beans, 2,200.
Minerals (metric tons, 1965): bauxite, 428,000; limestone (1964), 394,000; salt, 11,000; copper, 4,000; silver, 92,000 troy ounces; gold, 8,000 troy ounces.
Foreign Trade (1966): *Exports*, $31,780,000 (chief exports, 1965: coffee, $19,400,000; sisal, $3,680,000; sugar, $2,500,000); *imports* (1965), $36,260,000 (chief imports, foodstuffs; cotton fabrics; motor vehicles; industrial machinery). *Chief trading partner* (1963): U. S. (took 54% of exports, supplied 60% of imports).
Transportation: *Roads* (1964), 2,024 miles (3,257 km); *motor vehicles* (1965), 7,353 (automobiles, 6,576); *railways* (1965), 187 miles (301 km); *merchant vessels* (1966), 4 (23,000 gross registered tons).
Communications: *Telephones* (1966): 4,400; *television stations* (1965), 1; *television sets* (1965), 3,500; *radios* (1965), 63,000; *newspapers* (1965), 6 (circ., 23,000).

HAITI

Despite continuing economic and political troubles (and predictions of an early demise), the dictatorship of President François Duvalier seemed firmly entrenched throughout 1967. The economy, except for the tourist trade, showed no improvement. The government attempted to improve its international standing, but its efforts brought few results.

Political Affairs. Although Haiti entered 1967 in turmoil over plots and rumors of plots and invasions, it was reported in April that roadblocks and army patrols in and about the capital were less in evidence than at any recent time. During this peaceful interlude, Duvalier celebrated jointly his 60th birthday and his 10th year in power.

This calm was interrupted at the end of May when five cabinet ministers were dismissed, two of them disappeared from sight after being stripped of their civil rights and property. This move was followed by the execution on June 8 of 20 officers, half of whom were members of the elite presidential guard. Moreover, at the end of June four men, identified as bodyguards of one of Duvalier's sons-in-law, were executed for an assassination attempt on the dictator, and the son-in-law himself was ordered home from Europe to stand trial. He ignored the order. Other personal troubles came to light when Duvalier publicly criticized his wife.

In addition, during the course of the summer, more than 25 other political prisoners were shot and scores were jailed. A few suspects took to boats while others sought asylum in embassies. At one point a curfew was imposed, with troops concentrated around the presidential palace.

The country remains politically primitive. Neither the regime nor its opponents have well-organized political support. Duvalier can rely on only a handful of persons around him, and on the vague loyalty of the militia and the Ton-Ton-Macoute (the secret police)—as long as he pays them well. The masses are passive and perhaps fearful; the opposition is divided into factions.

Economic Affairs. Haiti, with a population of about 4.5 million, had annual expenditures of only about $28 million in 1967. According to Alliance for Progress statistics, Haiti ranks lowest in Latin America in per capita gross national product (as well as in life expectancy, per capita caloric intake, and literacy). The International Monetary Fund (IMF) reported the country's foreign exchange reserves at —$3.5 million, while the (U.S.) National Foreign Trade Council described the economy as recessive, with unemployment high, prices rising, the budget unbalanced, and the debt soaring.

Although U.S. tourists began to return in small numbers during the winter of 1966–67, the economy as a whole fared badly. Hotel owners remained deeply in debt. Public services continued to be virtually nonexistent. The economy suffered an additional reverse when Hurricane Inez in late 1966 destroyed part of the coffee crop, Haiti's main source of income. The regime opportunely received a $1.3 million loan from the Inter-American Development Bank. But owing to depressed conditions, tax collections fell off sharply, and the government withdrew funds from the Central Bank early in 1967. As a consequence, the IMF barred further withdrawals from Haiti's standby fund. Coffee production seemed slightly higher during 1967, but the amount available for export will probably not be appreciably higher for the marketing year beginning Oct. 1, 1967, than it was for the previous marketing year.

Foreign Affairs. With the exception of continued good neighborliness toward the Dominican Republic, Haiti experienced a further deterioration in its hemisphere relationships. Duvalier refused to send a delegation to the meeting of foreign ministers at Punta del Este, Uruguay, in April; Ecuador broke relations in July; and in August, Duvalier denounced four inter-American treaties on the right of asylum. U.S. aid remained minimal for malaria control and a medical school, but some food continued to come through private sources.

To counter his growing estrangement from the other American states, Duvalier has attempted to strengthen ties with Africa through a variety of means, including the establishment of new diplomatic posts in Africa. The regime has also continued to improve its relations with the Roman Catholic Church. Throughout 1967 contacts between church and state remained correct but hardly cordial, with the Holy See and the Haitian Roman Catholic hierarchy passively accepting the regime.

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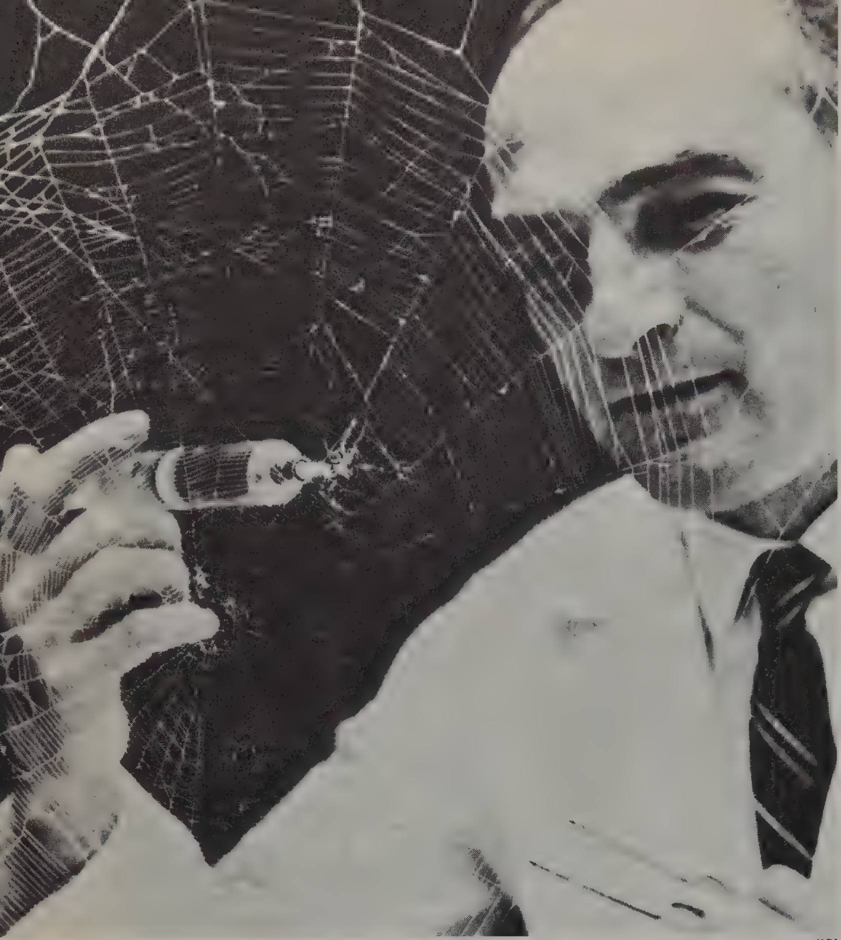


UPI

INJECTING LSD into a spider, a Canadian scientist participates in experiments conducted throughout 1967 to study the effects of hallucinogenic drugs. Spiders that have been subjected to the influence of LSD tend to spin oversized webs.

HALLUCINOGENIC DRUGS

Although exact figures on the number of persons taking hallucinogenic drugs are not available, there was reason to suspect a substantial increase in their use throughout the United States in 1967.

Hallucinogenic drugs cause subjective changes in a person's sense of himself and his surroundings. Often also known as "psychedelic drugs," they cause modifications in sense perception and produce reactions ranging from euphoria to severe depression.

Increases in drug use during 1967 were particularly apparent among groups of young people known as "hippies," who congregate in such areas as San Francisco's Haight-Ashbury section and New York's East Village. Most hippies range in age from 17 to 23 years. The use of hallucinogenic drugs was not, however, limited to hippies; increasing numbers of college students and adult middle class groups also started using the drugs.

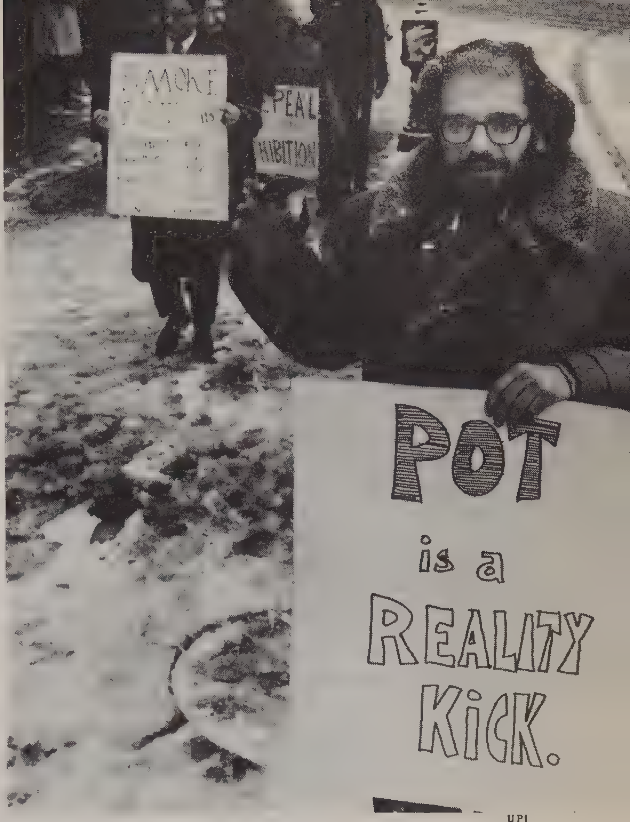
The increased use of drugs by college students led to concern among both college administrators and the students themselves. The National Association of Student Personnel Administrators sought to educate deans and other college administrators on how to cope with the problem of drug use on campus. In September, Princeton University students published their own pamphlet, *Psychedelics and the College Student.* This pamphlet, which was distributed to Princeton undergraduates and made available to other colleges, discusses the arguments for drug use and candidly assesses the risks involved.

Types of Hallucinogenic Drugs—*LSD*. The best-known hallucinogen, d-lysergic acid diethylamide—commonly known as LSD—was the subject of much medical research in 1967. In March, Dr. Maimon M. Cohen, who headed a research team at the School of Medicine at the State University at Buffalo, reported changes in human white blood cells grown in a test tube to which small amounts of LSD had been added. He stated that LSD damages or breaks chromosomes (hereditary material in the nucleus of all cells) in white blood cells. Some other investigators substantiated this research, but others, at the University of Caifornia at Berkeley, challenged these findings. They found no significant increase in chromosomal abnormalities in the white blood cells of LSD users.

Other medical research on LSD, conducted at the Harvard University Health Service, found that cats given large doses of LSD had significant changes in their brain wave patterns. Scientists at the University of California also investigated the possibility of LSD-induced epileptic seizures.

The first murder trial in which LSD figured occurred in the fall of 1967 in state supreme court in Brooklyn, N. Y. Steven Kessler was accused of stabbing his mother-in-law to death in April 1966. His defense contended that he was suffering from LSD-induced "total amnesia" at the time of the murder. He was acquitted on grounds of insanity.

***STP*.** A new hallucinogen, known as STP, was increasingly used in 1967. Its popular name, after the trademark of a motor fuel additive, has no relation to its chemical composition, which was identified as an experimental compound (DOM) developed by a chemical company. STP is reportedly much stronger than LSD, and it has been called a "megahallucino-



UPI

POET ALLEN GINSBERG urges the legislation of marihuana (pot) in a New York City demonstration in February.

gen." Its effects last for 3 or 4 days, compared with the 8- to 12-hour effects of LSD.

Marihuana. Marihuana is a mild hallucinogen that causes changes in mood, frequently a feeling of euphoria, and relaxation; it often produces changes in sense perceptions. The movement to legalize marihuana attained considerable momentum in 1967, and there was extended professional and public discussion of the effects of the drug. On September 12, Dr. J. Constandinos J. Miras of the University of Athens told a seminar at the University of California at Los Angeles that after observing chronic marihuana smokers in Greece for 20 years he concluded that the substance adversely affects personality, causing slow speech, lethargy, and loss of inhibitions. He also warned that marihuana could have a permanent effect on the brain. Other researchers, however, have challenged this view.

The arguments for and against the use of marihuana were presented in extensive detail in September 1967 during hearings in Boston prior to the trial of two men accused of possessing marihuana. Their attorney, seeking to overthrow the Massachusetts marihuana laws, maintained that marihuana should not be classified as a dangerous drug and penalties for its possession are unconstitutionally harsh.

The case attracted nationwide attention because Massachusetts marihuana laws are typical of the marihuana laws found in 25 other states, and because of the thoroughness with which both sides marshaled evidence on their behalf. Typical of the sharply differing views cited were the contention of Henry Brill, a New York psychiatrist, that unrestricted use of marihuana leads to a significant amount of vagabondage, dependency, and psychiatric disability, and the testimony by Joel Fort, a San Francisco psychiatrist, that marihuana is not likely to lead to sexual excess, deviant conduct, mental illness, or automobile accidents.

Although there is controversy about the effects of marihuana, many medical authorities agree that legal sanctions against marihuana and its grouping with heroin and other more dangerous drugs are wrong. The National Crime Commission noted that adequate knowledge of marihuana is not available and that "differences of opinion are absolute and the claims are beyond reconciliation." Four of the commission's 19 members protested what they termed its evasive treatment of the problems, and the commission's task force report included a recommendation by Michael P. Rosenthal, a professor of law, that "neither use nor simple possession of marihuana should be the subject of criminal prohibition by either Federal government or the states."

In September a U. S. Circuit Court of Appeals upheld the 30-year sentence and $30,000 fine against Timothy Leary, former Harvard University faculty member and a leading advocate of the use of hallucinogenic drugs, for illegally importing marihuana into Laredo, Texas, in 1965.

One important breakthrough in marihuana research in 1967 was the development by American and Israeli scientists of an economical way to synthesize tetrahydracannibinol, or THC, the compound thought to be the main active ingredient of marihuana. It is hoped that controlled experiments with THC will help resolve much of the controversy about marihuana.

Amphetamines. In 1967 there was also an increase in the use of amphetamines (dexedrine, benzedrine, and methedrine). Amphetamines are not hallucinogens; they are stimulants that act on the central nervous system, keeping the individual awake, decreasing fatigue and appetite, and elevating mood. When given for weight reduction, the usual oral dose is 5 to 30 milligrams a day. However, many drug users have started the practice of intravenous injection of 100 to 300 mg of amphetamines every 2 hours for a period of 3 to 6 days. It has been estimated that as many as 4,000 persons in San Francisco are injecting amphetamines regularly. Injection of amphetamines over a period of time could lead to psychosis or brain damage.

Treatment. Several new programs were developed in 1967 to treat the users of hallucinogenic drugs. In New York City a program known as "Encounter" was directed at young persons who are beginning to use "soft" drugs, such as LSD or marihuana. It is staffed by former drug users, most of whom are teenagers interested in doing preventive work.

In June 1967, Dr. David E. Smith opened the Haight-Ashbury Medical Clinic in San Francisco to treat problems associated with the use of LSD and other hallucinogenic drugs. Although the clinic averaged about 750 patients per week, it closed in September for lack of funds. Another program, called "LSD Rescue," was established in San Francisco to assist persons having a bad experience resulting from LSD.

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HANDBALL. See SPORTS.
HARNESS RACING. See SPORTS.
HARRIS, Barbara. See THEATER.

HAWAII

A mixture of conflict and progress marked the year 1967 in Hawaii. Conflict was evident in labor problems, the continuing battle for land reform on the island of Oahu (where 80% of the people of the state live), and the intensification of rivalries within the Democratic party. Progress was reflected in record income from tourism and the defense industry and in the enactment of experimental legislation of national interest.

Labor Problems. A 68-day strike by the Teamsters Union against the Honolulu Rapid Transit ended successfully for the union in April with an improved wage package. A construction strike, which began on September 2, halting work on Hawaii's new state capitol and other major projects on the island of Oahu, was ended by mid-September with substantial wage increases. Late in November the International Longshoremen's and Warehousemen's Union, which represents the majority of Hawaii's pineapple workers, warned of a strike if wage demands were not met before its 3-year contract expires on Jan. 31, 1968.

Political Conflict. The expected fight over leadership of the state Senate took place between Nelson K. Doi, of the island of Hawaii, and Nadao Yoshinaga, of Oahu. The two Democrats, old political rivals, battled until February 25 (10 days after the session began), when John J. Hulten, of Oahu, emerged as a compromise president of the Senate.

Appointments to Hawaii's supreme court by Gov. John A. Burns provoked a controversy that extended the Senate leadership battle to another area. Central to the controversy was the appointment of former Senate President Kazuhisa Abe, a political ally of Senator Yoshinaga and a rival of Senator Doi. The Senate finally confirmed the Abe appointment.

Legislation. The transit strike so concerned the legislature that it passed a bill giving counties the power to purchase, condemn, build, and operate mass transit systems. The legislature also succeeded in passing a moderate land reform bill. The measure, bitterly opposed by the large landowning groups, enables the Hawaiian housing authority to determine that the amount of land on Oahu not held in huge estates is insufficient for the demand for homesites and on that basis to condemn lots and sell the parcels. Condemnation also may be made when one half of the persons who own homes on a tract petition the authority for the right to buy the property. The constitutionality of the bill is expected to be challenged in the courts.

Three enactments of an experimental nature attracted national attention. One was a rent subsidy bill to provide aid for low- and moderate-income renters and homeowners. The bill permits the housing authority to provide supplements up to $50 a month, enables public housing tenants to contract with the authority to convert their rent payments to purchase payments, and includes provisions for subsidy to nonprofit builders of low- and moderate-income housing. Another bill, the first of its kind to be enacted by a state legislature, authorizes the office of ombudsman, an independent office charged with investigating citizens' complaints about acts of government officials. The third bill, which provides compensation up to $10,000 for persons who are victims of criminal attack, makes Hawaii among the first states to enact such legislation.

Finally, the legislature provided for a constitutional convention, which is expected to convene on July 15, 1968.

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HAWAII • Information Highlights

Area: 6,424 square miles (16,638 sq km).
Population: 741,000 (July 1, 1966 est.).
Chief Cities (1965 est.): Honolulu, the capital, 315,000; Kailua-Lanikai, 33,000; Hilo, 26,200; Wahiawa, 18,500.
Government: *Chief Officers*—governor, John A. Burns (Democrat); lt. gov. and secy. of state, Thomas P. Gill (Democrat); atty. gen., Bert T. Kobayashi (Democrat); director of finance, Andrew T. F. Ing; supt. of pub. instr., Ralph H. Kiyosaki; chief justice, William S. Richardson. *Legislature*—(convened Feb. 15, 1967): Senate, 25 members, (10 Republicans, 15 Democrats); House of Representatives, 51 members (12 Republicans, 39 Democrats).
Education: *School enrollment* (1965–66)—public elementary, 94,500 pupils (3,554 teachers); public secondary, 68,100 pupils (2,403 teachers); nonpublic schools, 33,400 pupils (1,250 teachers); college and university (fall 1965), 19,247 students. *Public school expenditures* (1965–66)— $78,107,000 ($515 per pupil); average teacher's salary, $6,820.
Public Finance (fiscal year 1967): *Revenues,* $491,790,580 (4% sales tax, $49,005,749; motor fuel tax, $20,316,761; federal funds, $103,495,802). *Expenditures,* $529,207,489 (education, $179,113,342; health, welfare, and safety, $70,246,687; highways, $46,083,699). *State debt,* $386,031,606.
Personal Income (1966): $2,230,000,000; average annual income per person, $3,124.
Public Assistance (fiscal year 1967): $13,666,366 to 22,350 recipients (blind, disabled, and aged $3,180,762; dependent children, $8,538,045).
Labor Force (employed persons 1967): *Agricultural,* 16,910; *nonagricultural* (wage and salary earners), 261,870 (9.4% manufacturing, 21.2% trade, 24.7% government). *Unemployed persons* (1967)—9,960.
Manufacturing (1965): Value added by manufacture, $288,928,000 (food and products, $180,122,000; stone, clay, and glass products, $16,427,000; nonelectric machinery, $4,014,000.
Agriculture (1966): *Cash farm income,* $199,339,000 (livestock, $37,291,000; crops, $162,048,000). *Chief crops* (tons)—sugarcane, 11,805,000 (ranks 1st among the states); papayas, 9,620; macadamia nuts, 4,573; taro, 4,493; bananas, 4,398.
Mining (1966 est.): *Production value,* $20,839,000. *Chief minerals* (tons)—stone, 5,098,000; pumice, 356,000.
Fisheries (1965): *Commercial catch,* 19,588,300 pounds ($3,602,224). *Leading species*—skipjack tuna, 16,157,309 pounds ($2,013,856); bigeye scad, 449,571 pounds ($239,262); striped marlin, 384,955 pounds ($118,291).
Transportation: *Roads* (1965), 3,308 miles (5,323 km); *motor vehicles* (1967), 251,228; *railroads* (1965) 8 track miles (13 km); airports with scheduled service (1967), 13.
Communications (1967): *Telephones* (1966), 324,000; *television stations,* 5; *radio stations,* 25; *newspapers,* 8 (daily circulation, Sept. 1965, 218,109).

HEAD START, Project. See Anti-Poverty Program; Education.

HEALTH, Public. See Public Health.

HEART DISEASE

Research on heart disease covered many aspects of this condition, the leading cause of death in the United States. Many investigators were concerned with reducing blood levels of cholesterol, while others studied the relationship between alcoholism and heart disease. Among other advances were the development of new drugs and surgical techniques.

Cholesterol Research. The principal investigators of the National Diet-Heart Study reported on a preliminary feasibility survey to test the effect of diet on blood cholesterol levels and the incidence of coronary artery disease. The study was carried out on 2,400 men between the ages of 45 and 54. Some volunteers were placed on control (normal) diets while others ate experimental diets that differed from the typical American diet in that they contained less saturated fats and cholesterol and more polyunsaturated fats. It was found that the cholesterol levels fell an average of 11% for all the men on the experimental diets.

As a result of other studies of cholesterol, two new drugs for lowering cholesterol and fat levels were made commercially available. One of these drugs, ethyl chlorphenoxyisobutyrate (Atromid-S), acts by reducing the rate of cholesterol synthesis in the body. In one study of 26 patients, the cholesterol values of all of them were lowered to normal. In 9 of 10 patients with advanced coronary artery disease there was an improvement in angina (chest pain), with the pain disappearing completely in 7 of them. The second of the two new drugs, sodium dextrothyroxin (Choloxin), is a synthetic thyroid hormone that is believed to act by increasing the breakdown of cholesterol in the body. At present, it is not considered safe enough to use in patients with known organic heart disease.

The National Heart Institute plans a large-scale project in which the effects of these two compounds as well as those of nicotinic acid (niacin) and estrogen (a female sex hormone) will be studied. The study will include 8,500 men between the ages of 30 and 64 who have had previous coronary artery occlusions. The men will be observed over a 5-year period at 55 centers throughout the country.

Studies of Alcoholism. In 1967, reports from Britain, Canada, and the United States suggested that chronic alcoholism may be responsible for cardiac enlargement and congestive heart failure. The relationship between abstinence from alcohol and clinical improvement was convincing, while continued alcoholism was directly related to clinical deterioration. These reports indicate that alcoholism is a causative factor in heart disease, but the exact role of alcohol is hard to determine, especially since many alcoholics suffer from dietary deficiencies.

Drug Therapy. The drug propranolol (Inderal), which blocks certain of the nerve impulses influencing the rate, force of contraction, and rhythm of the heart, is under intensive investigation in a number of medical centers and will soon be commercially available. Studies of propranolol indicate that the drug is valuable in the treatment of angina pectoris and certain irregularities of the heart, as well as in the reduction of high blood pressure.

Japanese investigators believe that another new compound, pyridinol carbamate, prevents the formation of fat deposits in arterial walls. In clinical trials in Japan, improvement was reported in patients with angina pectoris and peripheral arterial disease.

Heart Surgery. Probably the greatest advance in heart surgery during 1967 was the transplantation of a human heart, performed by Christian Barnard in South Africa. (See also SURGERY.) At other medical centers doctors began replacing diseased aortic valves with valves obtained at autopsies rather than the artificial valves that had been previously used. Experience has shown that these valves, removed from individuals who died from causes other than heart disease, function very efficiently.

From Australia, New Zealand, and France have come reports of a high rate of success using transplants of aortic valves obtained from calves. Such valves are also being used successfully in the United States.

There has been improvement in the use of artificial hearts as auxiliary pumps to supply blood to the body when heart failure has resulted in decreased cardiac output by the heart itself. At this time, however, such a pump cannot be used for prolonged periods to replace a diseased heart.

Use of Computers. Doctors at the Mayo Clinic and in the Public Health Service are using computers for routine clinical interpretation of electrocardiograms. Electrocardiograms can be sent by radio or telephone to the computer, where they are rapidly and accurately interpreted. Computers are also being used for monitoring cardiac patients in intensive care units. The computer is said to predict and analyze difficulties more rapidly than can a person watching the same vital factors, such as blood pressure and heart rate.

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HIGHWAYS

The highway program of the United States was bolstered in 1967 by the establishment, within the newly created U. S. Department of Transportation, of the Federal Highway Administration. The new agency continued the federal program, inaugurated in 1916, of giving financial aid to states to improve their highways.

The Federal Highway Administration functions through three operating components—the National Highway Safety Bureau, the Bureau of Motor Carrier Safety, and the Bureau of Public Roads. The Bureau of Motor Carrier Safety, formerly a component of the Interstate Commerce Commission, has jurisdiction over the safety performance of motor carriers engaged in interstate commerce.

Of the 3.7 million miles (5.9 million km) of roads and streets in the United States in 1967, about 910,000 miles (1,464,200 km) were in designated federally aided systems. Since the program began in 1916, federal aid has risen from a level of $5 million per year to $4.4 billion in 1967. Planned spending for the fiscal year 1969 is $4.8 billion.

The nationwide investment for highways in 1967 totaled $16.1 billion, with $9.4 billion spent for new construction and improvements and $6.7 billion for maintenance, administration, law enforcement and safety, and debt interest and retirement.

The Bureau of Public Roads continued to administer federal highway aid to the states. In addition, it administered the Highway Beautification Program and the highway construction phase of the Appalachian Regional Development Program; supervised road building in national parks and forests and other federal lands; conducted extensive programs in highway research, safety, and planning; and assisted other countries in developing road programs.

The reduction of traffic congestion in urban areas by increasing the capacity of roads, and the advancement of safety were promoted by the Bureau of Public Roads in 1967 through its Traffic Operations Program to Increase Capacity and Safety (TOPICS). This program involved an expansion of the federal-aid primary system to finance traffic-engineering improvements of certain principal streets and downtown grids in areas of 5,000 or more population. Through relatively modest investments the bureau expected to increase traffic speed on urban arteries as much as 25%.

Federal-Aid Programs. Federal aid to the states was available under two major programs in 1967. One provided the states with 50% of the cost of improving main rural highways, secondary roads, and urban streets on the federal-aid primary and secondary systems, totaling about 870,000 miles (1.4 mil-

APPORTIONMENT OF FEDERAL-AID HIGHWAY FUNDS AUTHORIZED FOR THE FISCAL YEAR 1969

Political unit	Primary, secondary, and urban highways	Interstate system	Total
Alabama	$18,804,111	$81,654,400	$100,458,511
Alaska	40,352,081	...	40,352,081
Arizona	12,445,065	58,088,700	70,533,765
Arkansas	13,266,971	29,532,175	42,799,146
California	58,876,758	367,257,175	426,133,933
Colorado	15,266,370	45,217,625	60,483,995
Connecticut	9,880,258	79,590,525	89,470,783
Delaware	4,278,502	6,754,500	11,033,002
Florida	21,030,823	83,005,300	104,036,123
Georgia	22,418,994	54,186,100	76,605,094
Hawaii	4,633,397	32,346,550	36,979,947
Idaho	9,046,154	22,177,275	31,223,429
Illinois	41,826,035	215,318,450	257,144,485
Indiana	22,444,380	82,479,950	104,924,330
Iowa	20,574,337	45,592,875	66,167,212
Kansas	19,815,335	28,031,175	47,846,510
Kentucky	16,225,798	78,427,250	94,653,048
Louisiana	15,681,375	95,238,450	110,919,825
Maine	6,682,836	16,736,150	23,418,986
Maryland	11,607,744	61,015,650	72,623,394
Massachusetts	16,353,690	81,804,500	98,158,190
Michigan	33,499,539	111,974,600	145,474,139
Minnesota	23,821,544	87,283,150	111,104,694
Mississippi	14,652,006	41,390,075	56,042,081
Missouri	26,444,074	91,260,800	117,704,874
Montana	14,298,256	38,425,600	52,723,856
Nebraska	14,994,704	21,351,725	36,346,429
Nevada	8,677,018	23,640,750	32,317,768
New Hampshire	4,366,098	18,162,100	22,528,198
New Jersey	19,106,919	99,178,575	118,285,494
New Mexico	12,665,574	45,105,050	57,770,624
New York	57,390,792	191,790,275	249,181,067
North Carolina	23,509,997	34,410,425	57,920,422
North Dakota	10,632,113	17,449,125	28,081,238
Ohio	38,243,763	232,354,800	270,598,563
Oklahoma	18,378,086	39,513,825	57,891,911
Oregon	13,854,160	66,081,525	79,935,685
Pennsylvania	42,327,288	181,771,100	224,098,388
Rhode Island	5,210,071	20,938,950	26,149,021
South Carolina	12,567,242	24,203,625	36,770,867
South Dakota	11,319,149	33,997,650	45,316,799
Tennessee	19,948,805	81,842,025	101,790,830
Texas	58,601,419	188,938,375	247,539,794
Utah	9,046,383	57,375,725	66,422,108
Vermont	3,971,589	26,867,900	30,839,489
Virginia	19,523,347	116,515,125	136,038,472
Washington	15,610,450	91,223,275	106,833,725
West Virginia	9,867,543	86,345,025	96,212,568
Wisconsin	22,631,080	31,408,425	54,039,505
Wyoming	8,935,656	37,037,175	45,972,831
District of Columbia	5,276,457	50,208,450	55,484,907
Puerto Rico	6,617,864	...	6,617,864

lion km). The other provided aid to the states for 90% of the cost of constructing the National System of Interstate and Defense Highways, a 41,000-mile (65,900-km) network of controlled-access highways.

The need for constant improvement of highways was pointed up by the increase in the number of motor vehicles and in motor vehicle travel in 1967. Preliminary figures indicated that 103 million motorists drove 97.5 million vehicles a total of 967 billion vehicle-miles (1.6 trillion vehicle-km). Of these motor vehicles, 81 million were passenger cars and 16.5 million, trucks and buses. In addition, 2.2 million motorcycles used the highways.

Most of the $4.4 billion federal authorization was allocated to the Interstate Highway System. A reduction of $1.1 billion, made in the fall of 1966, was restored in 1967. In the fiscal year ending June 30, 1967, an additional 2,500 miles (4,023 km) of the Interstate System were opened to traffic, bringing the total in use by the public to 24,100 miles (38,777 km), or 59% of the system.

As of June 30, 1967, an estimated $9,285,700,000 worth of work was under way or authorized on the Interstate System, and $3,826,400,000 worth of work was under way or authorized to improve federal-aid primary, secondary, and urban highways. The federal-aid highway program is financed through the Highway Trust Fund mainly drawn from motor-fuel taxes. Income to the fund in fiscal 1967 was $4,455,000,000.

Highway Beautification. The design and construction of attractive highways had high priority during 1967. The Highway Beautification Program provided for control of billboards and junkyards along Interstate and federal-aid primary system highways, and for landscaping and scenic enhancement along selected portions of all federal-aid highways. Many states acquired strips of land adjacent to federal-aid roads to preserve their natural beauty, or to develop them as rest and recreation areas.

New Freeway Plans. With 2,500 miles (4,025 km) of urban freeways yet to be built under the Interstate program, the Federal Highway Administrations has proposed a "joint development concept" to make maximum use of space and funds in urban areas. The key to the plan lies in the acquisition of entire blocks of property rather than the minimum required for freeway right-of-way. This would be cheaper than buying land piecemeal for housing, recreation centers, parks, etc. Of the total property acquired, the highway department would keep only a right-of-way. The rest of the property—over, under, and adjacent to the freeway—could be used for local purposes.

The effects of new highways on resources and values, as well as the impact on local people, were given new emphasis throughout the planning, routing, design, and construction of highways in 1967.

Road and Highway Safety. A program aimed at eliminating hazardous points on older roads by the end of 1969 moved ahead rapidly. As of June 30, 1967, the states had programmed 2,833 spot-improvement projects costing $515,873,000 on federal-aid systems. There were 20,600 such locations in the nation which could be corrected at a total cost of about $2,094,000,000.

The new National Highway Safety Bureau was the focal point for the new and expanding federal interest in highway safety. Two major enactments by Congress in 1966 provided the means for the first broad national effort aimed at reducing highway accidents, injuries, deaths, and property damage.

The National Traffic and Motor Vehicle Safety Act empowered the secretary of transportation to promulgate safety standards for vehicles sold in the United States, and 20 such standards became effective on Jan. 1, 1968. The Highway Safety Act of 1966 empowered the federal government to establish performance standards for state and local highway safety programs. Federal standards were issued in 1967 in 13 categories. All states are obliged to have their programs approved before the end of 1968, on penalty of loss of 10% of their federal-aid highway funds.

(See also NATIONAL HIGHWAY SAFETY BUREAU; TRANSPORTATION.)

J. W. PERLIN
Federal Highway Administration

HO CHI MINH. See biographical sketch under VIETNAM.

HOCKEY. See SPORTS.

HOLLAND. See NETHERLANDS.

HOME ECONOMICS. See CONSUMER AFFAIRS.

HONDURAS

Honduras' problems in 1967 stemmed, as before, from its lack of adequate civil liberties, good administration, and a fair distribution of wealth. However, the government did stimulate industrial

HONDURAS • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 43,277 square miles (112,088 sq km).
Population: 2,445,000 (June 30, 1967 est.).
Chief Cities (1961 census): Tegucigalpa, the capital, 170,535 (1965 est.); San Pedro Sula, 58,632; La Ceiba, 24,863; Puerto Cortés, 17,048.
Government: *President*—Oswaldo López Arellano (took office June 6, 1965); *Parliament*—Constituent Assembly, 64 members (party seating, 1967: Nationalist party, 35; Liberal party, 29).
Religious Faiths: Roman Catholics, 97% of population.
Education: *Literacy rate* (1961), 45% of population aged 15 and over. *Total school enrollment* (1964)—290,598 (primary, 267,177; secondary, 16,024; teacher-training, 2,966; technical, 2,192; higher, 2,239).
Finance (1966 est.): *Revenues*, $60,850,000; *expenditures*, $61,350,000; *public debt*, $52,250,000; *monetary unit*, lempira (2 lempiras equal U. S.$1).
Gross National Product (1966): $543,000,000.
National Income (1965): $442,000,000; average annual income per person, $194.
Economic Indexes: (1966): *Agricultural production* (1965), 138 (1965–57=100); *cost of living*, 115 (1958=100).
Manufacturing (metric tons): sugar (1966), 41,000; beer (1965), 19,000; wheat flour (1964), 18,000.
Crops (metric tons, 1966–67 crop year): Bananas (1964–65), 917,000; maize (1965–66), 414,000; sorghum (1964–65), 62,000; dry beans, 51,000; coffee, 28,500.
Minerals (metric tons, 1965): Limestone (1964), 118,114; zinc, 11,124; salt, 9,977; lead, 9,652; cadmium, 87; silver, 3,670,659 troy ounces; gold, 3,546 troy ounces.
Foreign Trade (1966): *Exports*, $145,100,000 (chief exports: bananas, $72,250,000; coffee, $19,850,000; wood, $10,550,000; silver, $3,150,000); *imports*, $149,050,000 (chief imports, 1965: Textile yarn and fabrics, $14,356,500; nonelectrical machinery, $13,695,500; road motor vehicles, $10,395,000). *Chief trading partners* (1965): U. S. (took 56% of exports, supplied 45% of imports).
Transportation: *Roads* (1964), 2,175 miles (3,500 km); *motor vehicles* (1965), 18,700 (automobiles, 10,201); *railways* (1965), 716 miles (11,520 km); *merchant vessels* (1966), 12 (51,000 gross registered tons); *principal airports*, San Pedro Sula, Tegucigalpa.
Communications: *Telephones* (1966): 8,852; *television stations* (1965), 3; *television sets* (1965), 8,000; *radios* (1965), 135,000; *newspapers* (1964), 7.

development and also encouraged the growth of Honduras' basic source of income, agriculture.

Political Affairs. The opposition Liberal party announced its affiliation with the progressive "democratic left" movement of Latin America in 1967. This ideological shift from a type of old-line laissez-faire liberalism was not universally accepted by party stalwarts, and some who objected were purged from party ranks.

Disunity was manifest in the leading Nationalist party, which was broken up into factions, partly as the result of an announcement by incumbent President Oswaldo López Arellano that he would not seek reelection when his term expired in 1967. A splinter group was formed late in the summer to promote Col. Armando Velásquez Cerrato for the presidency. Another early presidential hopeful, Gonzalo Carías Castillo, claimed that Nationalist party unity was impossible until his faction, the Popular Progressive group, was officially recognized. Other Nationalist leaders evinced a preference for Ricardo Zúñiga Agustinus, the minister of the presidency (who carries on the administrative duties of the presidency) and strong man of the regime.

Economic Affairs. Gains in the gross national product fell short of those registered during 1966. At midyear the growth rate was set at 1.4%, as opposed to 4% for the corresponding period of 1966. In part, the growth pattern was attributed to the government's policy of leaving development largely in the hands of the private sector.

A $3.5 million investment in a $92 million pulp and paper mill project was made by *Adela,* a consortium of industrial and banking interests from various countries interested in investment in Latin America. The plant, to be built on the Mame River, will supply Central American and United States markets. Alto Hornos de México, an iron and steel firm, proposed an investment of $25 million in a branch factory at Tegucigalpa. Signal Exploration Company reported normal progress in its search for petroleum in the Gracias a Dios department.

In order to quicken the pace of economic activity, additional loans were obtained from the United States for advancing road construction. Priority has been given to the completion of the Western Highway, which will provide the industrial center of San Pedro Sula with easier land access to the country's main port at Puerto Cortés and to El Salvador.

Although banana and coffee shipments were down, sugar was exported from Honduras for the first time, in 1967. Some 412,000 bags of Honduras' 1967–68 coffee crop will probably be placed in the world market, representing a 42% increase in Honduras' coffee export quota.

Social Affairs. A maternity and children's hospital was opened in Tegucigalpa in 1967, and the initial stages of building a new suburban campus for the National University of Tegucigalpa were completed. A $7 million loan from the U. S. Agency for International Development will be used for a basic reorganization and expansion of high school instruction.

The third convention of the National Peasant Association considered the increasing problem of border incidents, rural violence, and delays in implementing the agrarian reform law. National Agrarian Institute director Rigoberto Sandoval replied that it was his intention and also that of President López to carry out agrarian reform in accordance with constitutional guarantees and existing agrarian codes.

Foreign Affairs. A prolonged disturbance occurred near an ill-defined section of the El Salvador-Honduras border in the late spring, when Salvadoran civilians, accompanied by national guardsmen, invaded Honduran territory, kidnapping a rancher and six of his farm hands. The rancher had been accused of murdering a Salvadoran. The incident led to partial mobilization on both sides of the disputed boundary, with resulting deaths and the taking of prisoners. More violence was averted when the matter was turned over to boundary commissioners. Both sides later agreed to mediation by the foreign ministers of Nicaragua, Guatemala, and Costa Rica.

President López exchanged official visits in 1967 with Anastasio Somoza Debayle, the president of Nicaragua, and also made an official visit to Costa Rica. In April, López participated in the meeting of American presidents at Punta del Este (Uruguay).

LARRY L. PIPPIN
Elbert Covell College, University of the Pacific

UPI

HONG KONG RIOTERS are attacked by club-swinging police. The Communist-led demonstrations took place in May.

HONG KONG

Riots and sporadic violence disrupted the British Crown Colony of Hong Kong in 1967 and raised a question about its political future. Following the devaluation of the pound by Britain on November 18, Hong Kong devalued its currency by 14.3%, then revalued it upward by 10%.

The Riots. Outbursts growing out of labor disputes began in the Kowloon area in May. Strikers were joined by mobs of demonstrators who shouted quotations from the works of Mao Tse-tung and fought with the police. In June the strikes spread, crippling transportation and affecting public utilities. When the demonstrators failed to intimidate British authorities, leftists resorted to terrorism.

Attempting to prevent further provocations, the Hong Kong government closed the bridges to Communist China at Mankamto and ordered the suspension of three pro-Communist China newspapers. Peking protested these and other actions, and when the British refused to accede to demands, rioters in Peking attacked the British compound, burned the buildings, and beat the chargé d'affaires and other members of the staff. Finally, in November, there were reports of an accord between the two governments, and the crisis subsided.

Background. The failure of the strikes and riots pointed up the fact that the "left" in Hong Kong is badly led and lacking in organization. Fragmented groups merely identify with leftist or Communist leaders. One reason for the weak trade union movement is that the colony was chiefly an entrepôt and transshipment point until about 20 years ago, which means that industrial development in Hong Kong is of fairly recent origin. The average factory employs 37 persons, and the 308 labor unions have a total membership of only 131,306 out of a labor force of 1,500,000.

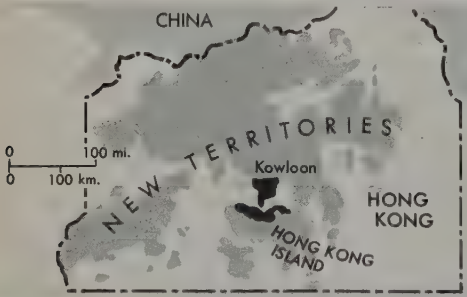
The political situation is further complicated by the fact that Hong Kong has no viable representative institutions. The franchise is restricted, and of the nearly 4 million inhabitants there are only about 26,000 registered voters, or slightly more than one half of 1%.

Although it is difficult to estimate what the people want, it appears that a majority of the inhabitants have rejected both the Chinese Nationalist and Communist political systems. Once again the Reform Club candidates for the Urban Council were defeated in elections held in the summer of 1967.

Role of Communist China. The general belief of observers and diplomats is that the disturbances of 1967 were primarily local in origin and inspiration rather than a serious attempt by the Communists to take Hong Kong. Communist China earns more than $600 million a year from its trade and commercial interests in Hong Kong, and according to the colony's officials the riots scarcely affected trade or tourism. The outbreaks in both Macao and Hong Kong were most likely a spillover of the cultural revolution in China. T'ao Chu, who controlled Kwangtung province and the South-central Bureau, probably put pressure on local Communists to prove that they were as revolutionary as the current political climate demanded. Once these groups had initiated confrontation politics in Hong Kong, Peking had little choice but to support them.

Throughout the period, the pro-Communist China press in Hong Kong never really emphasized

HONG KONG • Information Highlights



Area: 1,126 square miles (2,916 sq km).
Population: 3,709,000 (August 1966 sample survey).
Chief City (1961 census): Victoria, the capital, 633,138.
Government: *Governor*—Sir David Trench (took office 1965); *Colonial Secretary*—Michael D. Gass (took office 1965).
Religious Faiths: Buddhists and Taoists.
Education: *Literacy rate* (1961), 71.4% of population aged 15 and over. *Total school enrollment* (1964)—791,715 (primary, 604,648; secondary, 167,103; technical, 9,775; higher, 10,190).
Finance (1966–67): *Revenues,* $31,150,000,000; *expenditures,* $32,900,000,000; *monetary unit,* dollar (5.78 dollars equal U. S.$1; as of Nov. 23, 1967, 6.06 dollars equal U. S.$1).
Per Capita Income: $400.
Cost of Living Index (1965), 109 (1958=100).
Manufacturing (metric tons, 1966): Cement, 247,000; cotton yarn, 132,480; beer (1965), 18,200; wool yarn (1965), 7,900.
Crops (metric tons, 1965): Rice, 21,000.
Minerals (metric tons): Iron ore (1966), 136,800; tungsten (1965), 4.
Foreign Trade (1966): *Exports,* $1,324,000,000 (chief exports, 1965: clothing, $311,535,000; textile yarn, $182,382,000; electrical machinery and appliances, $53,870,000, cotton fabrics, $53,420,000); *imports,* $1,767,000,000 (chief imports, 1965: textile yarn, $221,386,000; live animals, $76,588,000; fruit and vegetables, $69,556,000). *Chief trading partners* (1965): Communist China (took 1% of exports, supplied 25% of imports); Japan (took 5% of exports, supplied 16% of imports); U. S. (took 27% of exports, supplied 10% of imports).
Transportation: *Roads* (1966), 575 miles (925 km); *motor vehicles* (1965), 78,390 (automobiles, 57,681); *railways* (1965), 22 miles (35 km); *principal airport,* Kai Tak at Kowloon Bay.
Communications: *Telephones* (1966): 261.475; *television stations* (1965), 1; *television sets* (1965), 50,000; *radios* (1965), 529,000; *newspapers* (1965), 47 daily circulation, 1,326,000).

such controversial issues as industrial relations, housing, and the weakness of representative institutions, although at times it criticized British administration and called for changes in local administration and full adult franchise. The main emphasis in Hong Kong and in Peking was on Chinese nationalism, and appeals were made on the basis of ethnic ties with mainland China.

ISHWER C. OJHA
Boston University

HOPPER, Edward

U. S. painter: b. Nyack, N. Y., July 22, 1882; d. New York, N. Y., May 15, 1967.

Edward Hopper, one of the most important realist painters of the 20th century, once said: "My aim in painting has always been the most exact transcription possible of my most intimate impressions of nature." He took his subjects from the commonplace and the local in the big city, the small town, and the American countryside, always avoiding the spectacular, the quaint, and the conventionally beautiful. In both his oils and his watercolors, he chose to picture a Manhattan office building or low-priced restaurant, a frame house, or drugstore.

Hopper represented these places in a deceptively matter-of-fact way, creating an illusion of almost photographic truthfulness, and yet giving them a formal power and a poetic quality suggesting lonely resignation and mysterious expectancy. In an era dominated by abstract and fantastic art, he was virtually the only representationalist painter with originality and integrity enough to hold the admiration of even the most avant-garde artists and art lovers.

Education. After graduating from high school in Nyack, N. Y., Hopper went to New York City to study illustration at a commercial art school. His interest soon turned to painting, and he enrolled at the New York School of Art, where from 1900 to 1906 he studied with Robert Henri, Kenneth Hayes Miller, and George Luks. From these American realists, Hopper acquired a lifelong interest in painting from everyday life. Between 1906 and 1910 he made three visits to Europe, spending most of his time in Paris painting city scenes and studying the work of realists such as Goya, Manet, and Degas. Picturesque travel experiences and current artistic developments such as expressionism and cubism had little effect on Hopper's basic vision.

Early Career. By 1910 all the elements of Hopper's style had been defined. Early works such as *Corner Saloon* (1913, Museum of Modern Art) already show the cool detachment and the sensitivity to light and structure that remained the hallmarks of his originality throughout his long career. His work attracted little attention, however, and was regularly rejected by exhibition juries. He turned to commercial art to support himself and gradually did less and less painting. In 1915 he took up etching, the medium that brought him his first success in exhibitions. About 1920 he again began to paint in oils, and in 1923 he started working in watercolor.

Success. The year 1923 marked a turning point in Hopper's career. He was awarded two major prizes for etchings, and the Brooklyn Museum bought one of his watercolor paintings of Gloucester, Mass., houses. This was his first sale since 1913, when he sold a painting at the Armory Show. As his reputation grew, Hopper gave up commercial art. In 1924 he married the painter Josephine Verstille Nivison, and the following year he painted *House by the Railroad* (Museum of Modern Art), perhaps his first masterpiece.

Hopper lived at 3 Washington Square North in New York City from 1913 until his death. He spent his summers at South Truro, Cape Cod, and made an occasional trip to Vermont or to the Far West.

Among his most important paintings are *Manhattan Bridge Loop* (1928, Addison Gallery of American Art, Andover, Mass.); *Early Sunday Morning* (1930, Whitney Museum of American Art, New York City); *Room in Brooklyn* (1932, Museum of Fine Arts, Boston); *Gas* (1940, Museum of Modern Art, New York City); and *Nighthawks* (1942, Art Institute of Chicago).

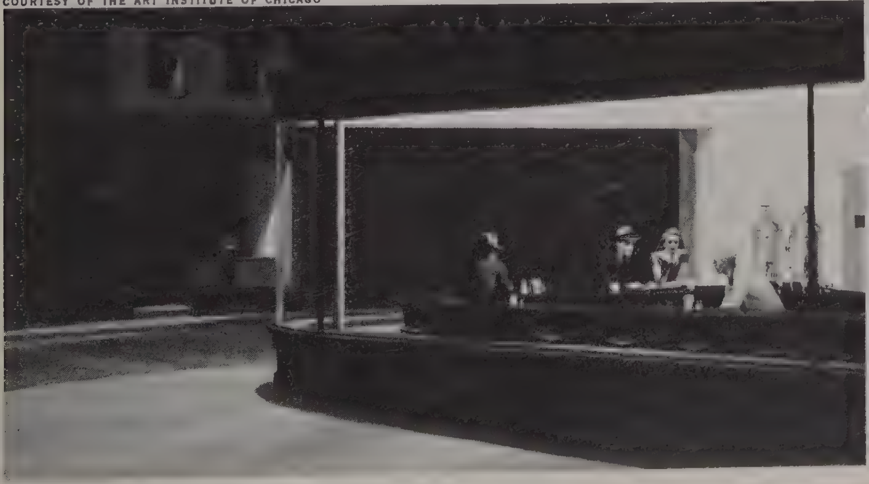
He was twice chosen to represent the United States in international shows, in the Venice Biennale (1952) and the São Paulo, Brazil, Bienal (1967).

VICTOR H. MIESEL
University of Michigan

HORSE RACING. See SPORTS.
HORSE SHOWS. See SPORTS.
HORTICULTURE. See GARDENING AND HORTICULTURE.

NIGHTHAWKS (1942) typifies the mood of the urban scenes painted by Edward Hopper, who died on May 15.

COURTESY OF THE ART INSTITUTE OF CHICAGO



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HOSPITALS

Hospitals in 1967 continued to be faced with a variety of problems. They had to make multiple adjustments to inflation, to meet the demands of the rapid advancement of medical science, and to satisfy the growing expectations of a service-minded public. They were also required to meet the problems raised by the Medicare and Medicaid programs, which completed their first year on July 1, 1967.

There was a small increase in the daily hospital census in 1966, and in the percentage of hospital occupancy as well, largely as the result of a higher proportion of older patients with a corresponding increase in length of stay. Maternity service experienced another year of decline, but outpatient service attained a new high.

With payroll expense approximately 65% of total expense, the increase in the number of employees required (5.4%) and the higher wages paid (4%) as the result of workers' unprecedented pressure caused expenses to advance an unusual 8.3% in a single year. Inaugurated only in the latter part of 1966, the full impact of present wage increases has not yet been seen. However, the total expense per patient day already averages $48.15, with future acceleration likely for community hospitals (short-term, nongovernmental, nonprofit, voluntary hospitals).

Accompanying statistics, showing the trends of the past 20 years, indicate more beds in the same number of hospitals per 100,000 population. However, the marked increase in the use of in-patient and out-patient services demonstrates the growing importance of the hospital as a community medical resource.

Immediate emphasis in the unique health economy market during the present era of great public concern has been on the proper control of expenditures and on measures to ensure a high level of performance in a service involving human lives. Regional medical programs, area-wide planning, creation of facility-sharing complexes, utilization review, and the introduction of modern techniques of hospital management are the matters of concerned priorities. Blue Cross, acting as intermediary agent for producers and consumers alike, is developing a significant and unprecedented role in health history.

HOSPITAL STATISTICS

Category	All hospitals	Voluntary short-term hospitals
Number of hospitals:		
1947	6,173	4,475
1966	7,160	5,812
Number of beds:		
1947	1,400,318	465,209
1966	1,678,658	768,479
Number of admissions:		
1947	17,788,535	15,908,436
1966	29,150,978	26,896,845
Average daily census:		
1947	1,190,266	354,143
1966	1,398,491	587,866
Percentage of occupancy:		
1947	85.0	76.9
1966	83.3	76.5
Number of births:		
1947	2,825,879	2,759,247
1966	3,385,113	3,261,428
Outpatient visits:		
1947	40,951,542	31,969,894
1966	142,201,126	106,524,247
Number of full-time personnel:		
1947	882,623[1]	538,670[1]
1966	2,039,323[2]	1,482,264[3]
Full-time personnel per 100 beds:		
1947	63	116
1966	121	193
Payroll expense:		
1947	$ 1,332,572,000	$ 774,049,000
1966	9,286,284,000	6,277,115,000
Payroll expense per patient day:		
1947	$ 3.06	$ 5.98
1966	18.27	29.41
Total expense:		
1947	$ 2,354,344,000	$ 1,434,120,000
1966	14,198,424,000	10,276,413,000
Total expense per patient day:		
1947	$ 5.41	$ 11.09
1966	27.94	48.15
Total assets:		
1947	$ 5,881,156,000	$ 3,438,600,000
1966	26,336,363,000	17,783,056,000

[1] Includes interns, residents, and students. [2] Excludes 66,618 physicians and dentists. [3] Excludes 50,179 physicians and dentists. (Source: *Hospitals*, American Hospital Association Journal, August 1967.)

Patients, now endowed with a "right," with their doctor and hospital fees theoretically paid for by government, are expecting a changed atmosphere in clinic and ward service. With hospitals no longer burdened with unpaid charity cases, hospital employees feel free to demand wages more commensurate with those in other industries.

The task of obtaining highly skilled labor in sufficient quantity remains the greatest challenge to hospital management. Recruitment and health career development are two ways in which, it is hoped, new people will be attracted to health and hospital work. It is also hoped that career development programs will increase the productivity of workers already in the field. A constantly improving management with highly developed organizational, human, and conceptual skills is imperative to achieve the programs required to meet the nation's hospital needs.

JAMES A. HAMILTON
Emeritus Professor, Hospital Administration
University of Minnesota

HOTELS AND MOTELS

A number of mergers and diversification moves were among the most notable trends in the United States lodging industry in 1967. Recognizing the fact that adequate lodging facilities are required to develop tourism and that there is an increasing demand for the packaging of airline and hotel reservations, two major American airlines moved into the overseas business in 1967 by buying United States-based hotel companies. Trans World Airlines took over Hilton Hotels International, which operates 34 overseas properties. Eastern Air Lines bought an interest in Rockresorts, which manages Laurance Rockefeller's resort hotels in Puerto Rico, the Virgin Islands, and Hawaii. The International Telephone & Telegraph Corporation announced plans to purchase the Sheraton Corporation of America, which owns or operates 155 hotels and motels in the United States and foreign countries. (See also TRAVEL.)

Lodging Statistics. Gross income for the 65,850 hotels and motels in the United States rose to $5,256,000,000 in 1967 from $5,110,000,000 in 1966. The nation's hotel room occupancy for 1967 equaled the 64% average of the preceding year. In the three previous years hotel occupancy had shown a slight gain.

New Hotels. The $18 million 800-room Regency Hyatt House Hotel in Atlanta was the largest U. S. hotel to make its debut in 1967. For the first time in a decade three new major hotels opened in the same season in the Miami Beach, Fla., area. The new establishments are the Sheraton Four Ambassadors in Miami, with 450 hotel suites and 300 apartments; the 550-room Marco Polo; and the 500-room Statler Hilton Plaza, the last two in Miami Beach.

Among the larger new hotels completed outside the United States in 1967 were the 401-room Hotel

Bonaventure and the 300-room Château Champlain in Montreal, Canada; the 301-room Brussels Hilton, Brussels, Belgium; the 265-room Sheraton-Philippines Hotel, Manila, Philippines; the 200-room Hotel Inter-Continental Lahore, Lahore, Pakistan; the 200-room Hotel Inter-Continental Rawalpindi, Rawalpindi, Pakistan; and the 168-room Sheraton-Oceanus Hotel (North), Freeport, Grand Bahama Island, Bahamas.

New Motels. Holiday Inns of America opened 67 new motels having 10,259 rooms in 1967. The largest of these was the 333-room inn in Dearborn, Mich. Other U. S. motels completed by major systems in 1967 included 41 Howard Johnson's motor lodges with a total of 3,799 rooms; 17 Sheraton motor inns with a total of 2,257 rooms; 11 new Statler Hilton inns having a total of 2,536 rooms; and 33 TraveLodge Corp. motels with a total of 1,689 rooms.

Albert E. Kudrle
Director of Information
American Hotel & Motel Association

HOUSING

Rioting and looting in Detroit, Mich., Newark, N.J., New Haven, Conn., and other American cities in the summer of 1967 revealed dramatically the frustrations that had developed among the Negroes living in the ghettos of large metropolitan areas. As the gravity of the nation's urban problems—including housing—became evident, leaders in public and private life groped for an understanding of the conditions and for ways to ameliorate them.

Many legislative remedies were introduced in Congress. Sen. Charles H. Percy of Illinois proposed a National Home Ownership Foundation Act, reflecting his conviction that stability could best be brought to slum and ghetto areas by providing residents with the opportunity to become homeowners. Sen. Robert F. Kennedy of New York introduced a legislative proposal designed to encourage private enterprise to build low-cost housing in slum areas.

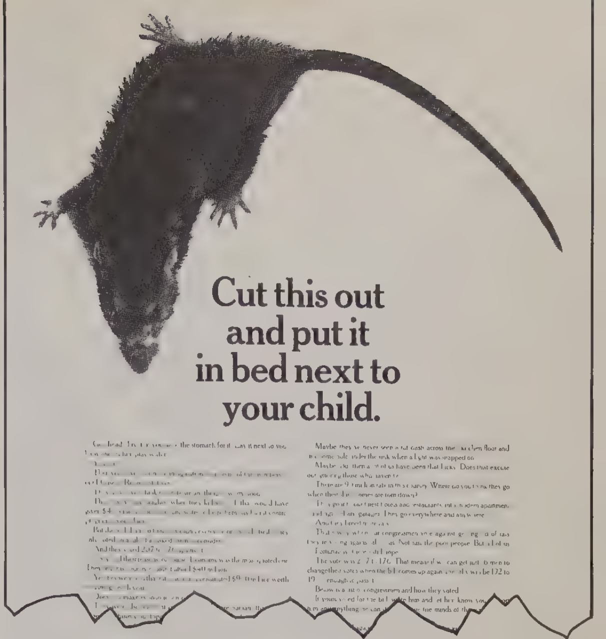
Governmental Activity. In the housing field in late 1966 and in 1967, governmental activities centered on these major developments:

(1) The Demonstration Cities and Metropolitan Development Act of 1966 was passed, and 63 cities were selected in November 1967 to receive a total of $11 million in federal funds to plan "model cities" programs. Later these cities were to receive $200 million in supplemental grants to carry out the plans plus $100 million for urban renewal projects in "model cities" areas.

(2) The administration proposed and Congress considered bills for housing and urban redevelopment and national flood insurance.

(3) Congress and the executive branch attempted to evaluate and develop appropriate measures for dealing with the deep-seated social tensions evidenced by the urban rioting.

Demonstration Cities. On Nov. 3, 1966, President Johnson signed into law the Demonstration Cities and Metropolitan Development Act. This legislation authorized the secretary of housing and urban development to provide grants and technical assistance to help communities of all sizes to plan, develop, and carry out comprehensive city demonstration programs. The programs are designed to rebuild and restore entire sections and neighborhoods of slum and blighted areas. They involve the concentrated and coordinated use of all available federal aids together with local, private, and governmental resources. The legislation also authorized supplemental grants to state and local public bodies. These grants may amount to up to 20% of the cost of projects receiving aid under certain federal programs in metropolitan areas where development is being carried out under metropolitan planning and programming. The supplemental grant was designed to be an incentive to coordinated, planned metropolitan development.



COURTESY OF BERT STEINHAUSER AND CHARLES KOLLEWE

RAT CONTROL BILL defeated by Congress in the summer of 1967 brought sharp criticism from leaders concerned with urban housing and inspired this advertisement in newspapers. After considerable publicity and repeated prodding by President Johnson, a bill was finally passed, and $40 million was allocated to combating a major health menace.

The law provided, in addition, authority for Federal Housing Administration (FHA) mortgage insurance to support (1) the development of new communities, (2) the construction of facilities for the group practice of medicine, and (3) the rehabilitation by nonprofit groups of substandard housing for sale to low-income families. The new law also modified the urban renewal program to emphasize projects that provide a substantial number of housing units for low- and moderate-income families.

Urban and Flood Legislation. On April 5, 1967, Sen. John Sparkman of Alabama introduced the administration's housing and urban development bill. One provision would authorize the secretary of housing and urban development to make grants to units of general local government for rat control and extermination. The measure also proposed an increase in the maximum interest rate permitted on FHA multi-family mortgage insurance programs to 6% and modified the formula for establishing the interest rate on loans for college housing. In November 1967 the Senate Banking and Currency Committee reported favorably on this bill, and it added a provision to encourage home ownership among the poor through an interest-rate subsidy.

The administration also proposed to the Congress the national flood insurance bill. It would authorize a national program under which insurance can be made available to protect homes against flood loss in flood-prone areas through the cooperative efforts of the federal government and the private insurance industry. The federal government would subsidize some of the premium cost of the flood insurance policies issued by private companies. The legislation was also designed to encourage state and local governments to adopt land use provisions to restrict the future development of land that is exposed to flood hazard.

Other Activities. The controversial rent supplement program, first granted funds by Congress in 1966, got under way, but in 1967 Congress appropriated only $10 million of the $40 million requested by President Johnson to continue the program.

President Johnson established a special body, the National Commission on Urban Problems, under the chairmanship of former Sen. Paul H. Douglas. In addition, the President appointed a Committee on Urban Housing and named Edgar F. Kaiser chairman. The committee will examine every possible means to establish institutions that would encourage private industry to rebuild in a large-scale, efficient way. The committee's job, the President said, is "to harness the production power of America—which has proved it can master space and create unmatched abundance in the marketplace—to the most pressing unfilled need of our society."

The President also announced a pilot demonstration program of public housing, constructed and managed by private enterprise. In addition, he announced that, in a number of cities, federally owned land would be used to build "new towns in town"—that is, communities within existing cities. These would be well-balanced communities, providing housing and other facilities for families representing a wide spectrum of economic and social achievement.

Federal Financing. Federally assisted urban renewal activity in 1967 continued at a high level. Federal funds for this purpose amounted to $774.5 million in 1966, and to $306.3 million for the first half of 1967. By June 1967, total grants made since the beginning of the urban renewal program in 1949 amounted to $6.1 billion, and over 2,200 urban renewal projects and related programs had received federal financial support.

Federally assisted low-rent public housing units completed, under construction, or planned increased from 780,865 at the end of 1966 to 837,473 in June 1967. Capital grants for urban mass transportation increased from slightly over $190 million at the end of 1966 to nearly $280 million in June 1967. Grants for open-space land—that is, to preserve and create open land for parks, recreation, and scenic or recreational purposes—rose from slightly over $100 million at the end of 1966 to about $132 million in July 1967.

By August 1967, the new programs authorized by the Housing and Urban Development Act of 1965 were gaining momentum. Approved grants included nearly $33 million for neighborhood facilities, nearly $12 million for 115 urban beautification projects, and almost $175 million for 363 water and sewer projects. Nearly 2,000 direct loans at 3% interest—a $9 million outlay—had been approved by August 1967 for rehabilitation in urban renewal or code enforcement areas. Over 3,000 grants, totaling $4.6 million, had been made to low-income homeowners in urban renewal areas to assist them in rehabilitating their homes.

Private groups seeking to build rent-supplement projects to house low-income families had applied for over $45 million in annual rent-supplement contract payments. These applications involved 591 projects and over 62,000 living units.

Residential Construction. The number of new, permanent, nonfarm private housing units started in the United States in 1966 was estimated at 1,141,500—significantly below the 1,450,600 started in the preceding year. The reduction resulted from a critical shortage of mortgage funds.

The drop became steepest in the last three months of 1966 when starts fell below an annual rate of 1 million. As the supply of mortgage funds improved, the rate of housing starts rose gradually. In January 1967 housing starts stood at an annual rate of 1,079,000 units, and by August 1967 preliminary estimates showed that the annual rate of housing starts had reached 1,355,000. This, however, was still below the 1965 rate.

Of the privately financed nonfarm housing units started in August of 1967, 81.3% were financed through conventional loans without direct government assistance, 14.1% through FHA-insured loans, and 4.6% through loans guaranteed by the Veterans Administration (VA).

Construction Costs. The average cost of building a nonfarm single-family dwelling unit in the United States has climbed steadily. In 1959 the average was $13,425, but by 1966 it had risen to $16,875, and in June of 1967 it was $17,375. The E. H. Boeckh residential construction cost index (1957–59 = 100) stood at 115.2 in 1965, 120.2 in 1966, and 129.4 in July 1967. Costs of residential construction are rising partly because houses are larger, better constructed, and contain more amenities.

Market Conditions. The shortage of funds available for investment in mortgages, which had reached crisis proportions in 1966, eased somewhat in early 1967. Interest rates nevertheless remained high, as did the discounts charged by lenders purchasing fixed-interest loans insured by the FHA or guaranteed by the VA. FHA reports show that the average conventional mortgage interest rate for new homes ranged between 6% and 6.7% during 1966; in January 1967 the average rate was 6.65%, and by September 1967 it had dropped only slightly to 6.55%. Reflecting this relatively small drop in mortgage interest rates, prices paid for FHA-insured 6% loans with 30-year maturity and minimum down payment rose from $93.20 per $100 of loan in December 1966 to $94.80 in September 1967.

(See also CITIES AND URBAN AFFAIRS.)

M. CARTER McFARLAND
Federal Housing Administration

HOUSTON

Houston, Texas' largest city (1965 est. pop.: 1,100,000), maintained in 1967 the high rate of growth that has made it the nation's sixth largest city (after New York, Chicago, Los Angeles, Philadelphia, and Detroit).

The Houston metropolitan area, which consists of Brazoria, Fort Bend, Harris, Liberty, and Montgomery counties, shared in this growth, both economically and in population (July 1, 1966 est. pop.: 1,740,000). The Port of Houston continued to be the nation's third largest port, with an annual tonnage exceeded only by New York and New Orleans.

In August the National Aeronautics and Space Administration announced the appointment of 11 new astronauts, most of whom reported for duty at the Manned Spacecraft Center near Houston.

Employment and Earnings. The number of employed persons in the Houston area stood at 642,200 in October 1967, compared with 627,600 in October 1966. Of these, the largest numbers were employed in wholesale and retail trade (173,000) and manufacturing (127,400). Next, in order, were services (90,600), government (71,300), and contract construction (63,400). The weekly earnings of production workers on manufacturing payrolls averaged $133.88 in October 1967, compared with $129.08 a year earlier.

Construction. The Houston Chamber of Commerce reported that the city ranked third nationally in dollar value of contract construction during 1967. The total (a record) was $706.3 million. Another $400 million in petrochemical and refinery construction within the metropolitan area gave a 1967 total of more than $1.1 billion.

The multimillion-dollar Convention and Exhibition Center in the downtown Civic Center complex was completed and formally dedicated. Construction started on a 100-acre amusement complex, Astroworld, which is expected to open in 1968 as a part of the Astrodome-Astrohall Exhibition Center facilities.

Student Riot. One policeman was killed and two policemen and a student were injured in the early morning hours of May 17, when police and students exchanged gunfire during a riot at Texas Southern University, a predominantly Negro state-supported institution in Houston. The officers who were struck by bullets were members of a group proceeding toward a dormitory from which shots had been fired at them. More than 450 students were arrested, and felony charges were filed against 5, who later (June 2) were convicted. The riot grew out of a rally held on the evening of May 16 to urge picketing of a nearby public school in protesting alleged unequal punishment of Negro and white pupils.

Cassius Clay Trial. On June 20 a federal jury in Houston convicted Cassius Clay, deposed heavyweight boxing champion, of violating U. S. Selective Service laws by refusing to be drafted. He was given the maximum sentence of 5 years in prison and a $10,000 fine and later released on bond. Clay had refused to be inducted into the Army on April 28 in Houston (his official residence at the time) on the ground that he was a full-time Black Muslim minister and thereby exempt. (See also SPORTS—*Boxing.*)

S. R. B.

HOVING, Thomas P. F. See biographical sketch under ART.

HUMPHREY, Hubert Horatio

Vice president of the United States: b. Wallace, S. Dak., May 27, 1911.

Vice President Humphrey experienced another strenuous year in 1967 as President Johnson continued to place heavy responsibilities on his shoulders. He served as a spokesman for the administration throughout the nation and in other parts of the world. His chief task was to combat criticism of Johnson's policies and rebuild support for them.

Vietnam. The defense of administration policies in Vietnam remained at the top of Humphrey's agenda. He maintained that U. S. security was threatened by developments in Southeast Asia and charged that critics of the war were prolonging the struggle by leading the enemy to believe that Americans would soon accept their terms for peace. The vice president insisted that U. S. military efforts in Vietnam were an effective and essential means of obtaining an acceptable settlement there.

UPI

VICE PRESIDENT HUMPHREY joins group singing in a refugee village during a tour of South Vietnam in October.

The Cities. Humphrey did not neglect the major problems in U. S. urban centers. He asserted that the nation could attack problems at home even while waging a costly war in Asia, and he criticized congressmen intent on reducing domestic spending. When riots erupted in the cities in the summer, he called for a "Marshall Plan" to meet the social and economic evils that he regarded as the source of the violence. He sought to draw business leadership into the battle against urban poverty and helped two Negro Democrats win election as mayors of Gary, Ind., and Cleveland, Ohio.

The Democratic Party. The vice president also devoted some of his seemingly boundless energy to problems within his party. He sought to strengthen party organization and block Democratic participation in anti-Johnson movements. He tried unsuccessfully to dissuade Sen. Eugene McCarthy of Minnesota from seeking to replace Johnson as the party's candidate. Once a hero of the liberal movement, Humphrey had become an alien to many of its members. He criticized them for cutting themselves off from the President.

Foreign Travel. The vice president made four major trips outside the United States in 1967. In March and April he spent two weeks conferring with leaders in Europe. He traveled to South Korea for the inauguration of President Park Chung Hee on July 1 and, late in October, returned to Asia to participate in inauguration ceremonies in South Vietnam and to visit Malaysia and Indonesia. At the end of the year he journeyed to Africa in the hope of providing evidence of U. S. interest in that continent.

Prospects. Whatever Humphrey's standing among liberals, Johnson apparently was pleased with his lieutenant and, as the year ended, Humphrey's political future seemed to depend primarily on the fate of his chief.

Background. Hubert Humphrey earned degrees at the University of Minnesota and the University of Louisiana. In the early 1940's he served in the Work Projects Administration and the War Manpower Commission. Humphrey was elected mayor of Minneapolis in 1945, and was elected to the U. S. Senate in 1948. Frustrated in his bid for the Democratic presidential nomination in 1960, he became Senate majority whip the following year. In 1964, President Johnson selected Humphrey for the vice presidency.

RICHARD S. KIRKENDALL
University of Missouri

HUNGARY

The attention of Hungary's leaders was absorbed chiefly by internal affairs in 1967. Hurried preparations were made for the institution of the New Economic Mechanism, to be effective on Jan. 1, 1968. In foreign affairs, János Kádár, first secretary of the Hungarian Communist party, promoted Danubian economic cooperation and followed the Soviet Union's leadership closely.

Internal Affairs. The year began with several shifts in official leadership. Ferenc Nezvál, minister of justice, was ousted from his post and from the Communist party's central committee. His place was taken by Mihaly Korom. A strong advocate of economic reform, István Szurdi, replaced János Tausz as minister of internal trade. In December 1966 the central committee of the Communist party was expanded to 101 members, and candidate membership was abolished. In 1967 only 58 full members and 17 former candidate members were reelected to the new central committee.

Further changes took place in April 1967 as Jenő Fock took over from Gyula Kállai as premier. Fock, who was deputy premier and who has been a party member for 35 years, said in his inaugural address on April 14 that a complete change in the management of economic affairs would follow. István Dobi also resigned from the chairmanship of the presidential council. He was replaced by Pál Losonczi, former minister of agriculture. The appointment of two new deputy premiers, both economic experts, emphasized the government's determination to reform. They are Miklós Ajtai, a former chairman of the state planning office, and Mátyá Timár, former minister of finance. The two remaining deputy premiers are Antal Apró, an expert on eastern Europe's Council of Economic Mutual Assistance (COMECON), and Lajos Fehér, the government's adviser on agriculture.

Liberalization of political life went hesitantly forward. For the first time since 1947, Hungarians were allowed some choice of candidates for political office. On March 19 there were multiple candidates for 9 of 349 parliamentary districts, and 743 of 84,635 county, district, and local council seats. None of the "opposition" candidates won, but an important precedent was set.

The first session of the new National Assembly, July 12-14, tested the government's earlier promises of a larger role for Parliament in national affairs. Delegates voiced criticisms of the use of governmental decrees, complained about some aspects of the reforms, and demanded more power to legislate.

In other, less liberal, moves, the government pressed its prosecution of spies, counter revolutionaries, and former war criminals. Death sentences were given to János Hamusics, who blew up a railway line on March 28, 1966, and to three ex-members of the fascist Arrow Cross party for war crimes in 1944–45. The anticlerical campaign, begun in 1966, continued. József Cardinal Mindszenty's asylum in the U. S. embassy in Budapest was still an embarrassment to the Kádár regime and a stumbling block to a Vatican accord. In the summer of 1967, Cardinal Mindszenty announced his wish to leave his asylum in the fall. However, at the request of the Vatican, he did not carry out his plan.

Economic Developments. Preparations for the New Economic Mechanism were made throughout 1967. To reduce bureaucratic interference and expenses,

HUNGARY • Information Highlights

EUROPE
ASIA

Area: 35,919 square miles (93,030 sq km).
Population: 10,205,000 (April 30, 1967 est.).
Chief Cities (1964 est.): Budapest, the capital, 1,928,000; Miskolc, 165,000; Debrecen, 144,000; Pécs, 132,000.
Government: *Chairman of Presidential Council*—Pál Losonczi (took office April 14, 1967); *Communist party first secretary*—János Kádár (took office Oct. 25, 1956); *Premier*—Jenő Fock (took office April 14, 1967). *Parliament*—National Assembly, 340 members.
Religious Faiths: Roman Catholics, 59% of population; Protestants, 30%; others, 11%.
Education: *Literacy rate* (1960), 97% of population aged 15 and over. *Total school enrollment* (1964)—1,725,242 (primary, 1,445,124; secondary, 149,889; technical/vocational, 81,419; higher, 48,810).
Finance (1965 est.): *Revenues*, $8,400,000,000; *expenditures*, $8,400,000,000; *monetary unit*, forint (11.74 forints equal U. S.$1).
Net Material Product (1966): $15,656,100,000.
Economic Indexes (1966): *Industrial production*, 189 (1958=100); *agricultural production* (1964), 148 (1949=100); *cost of living*, 105 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 2,652,000; cement, 2,604,000; wheat flour, 1,284,000; wine, 505,000; sugar, 459,000; gasoline (1965), 455,000; meat, 261,000.
Crops (metric tons, 1966): Maize, 3,907,000; sugar-beets, 3,569,000; potatoes, 2,433,000; wheat, 2,202,000.
Minerals (metric tons, 1966): Lignite, 25,992,000 (ranks 5th among world producers); bituminous coal, 4,356,000; crude petroleum, 1,704,000; bauxite, 1,428,000; iron ore, 746,000; lime (1965), 709,274; manganese ore (1965), 175,960; natural gas, 1,518,000,000 cubic meters.
Foreign Trade (1966): *Exports*, $1,593,000,000 (chief exports, 1965: nonelectrical machinery, $202,273,000; transport equipment, $176,594,000; electrical machinery, $110.939,000; iron and steel, $101,627,000); *imports*, $1,565,000.000 (chief imports, 1965: nonelectrical machinery, $253,581,000; transport equipment, $110,530,000; iron and steel, $103,041,000). *Chief trading partners* (1965): USSR (took 36% of exports, supplied 38% of imports); Czechoslovakia (took 12% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 18,169 miles (29,240 km); *motor vehicles* (1965), 99,395; automobiles (1964), 35,000; *railways* (1965), 5,036 miles (8,103 km); *state airline*, Hungarian Air Lines; *principal airport*, Budapest.
Communications: *Telephones* (1966): 566.026; *television stations* (1965), 11; *television sets* (1965), 831,000; *radios* (1965), 2,484,000; *newspapers* (1965), 24.

the directorates of the Motor and Tractor Industry Trust and four other industrial trusts were abolished. This was followed by the industry-wide amalgamation of several service, industrial, and agricultural trusts. Staff reductions of up to 50% were required of a number of government ministries.

The Hungarian economy improved slightly in 1967. More consumer goods—imported and domestic—were on sale. About 49 billion forints—7% more than in 1966—were invested in the economy.

Several less-productive coal mines were closed so that richer ones could be more heavily mined. Work was begun on a 10 billion forint system of dams, navigation locks, and power stations on the Tisza River. From the new petroleum fields near Szeged, Hungary hopes to produce 20 million tons of crude oil and 25–30 billion cubic meters of natural gas over the next 20 years. In 1966 Hungary produced about 1.7 million metric tons of crude oil and more than 1.50 billion cubic meters of natural gas.

Farm problem remains unsolved. State and collective farms, which control 67.4% of arable land, yield only 44% of the gross national agricultural product. To encourage more peasant cooperation and greater efficiency, the collectives were given more freedom to sell directly to restaurants, retailers, state agencies, and other collectives. They were even allowed to export produce.

Foreign Affairs. Hungarian-Soviet relations were very cordial in 1967. János Kádár criticized Communist China and called for an international Communist party conference to deal with Chinese "bourgeois" isolationism and nationalism. The Hungarians supported the Soviet Union in the meeting of European Communist parties at Karlovy Vary, Czechoslovakia, April 24–26, and signed a new pact of friendship with the USSR on September 7.

Kádár promoted Danubian economic cooperation and signed scientific and technical exchange agreements with several neighboring states. Foreign Minister János Péter stated that cooperation between "those living on the border between two social systems . . . could be an important factor in the development of European peace and the system of European security."

Relations with the United States continued to be cool despite President Johnson's policy of conciliation toward the East European bloc. The Vietnam conflict and the Israeli-Arab war of 1967 made improvement of relations difficult.

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HUNTING AND FISHING

In 1967 the Department of the Interior reported that hunters and fishermen spent more than $139 million for over 42 million state hunting and fishing licenses, tags, permits, and stamps in the fiscal year ended June 30, 1966. There was a decrease of 1,436,897 hunting and 807,486 fishing sales, but the payments for licenses reached new highs of over $64 million and $75 million, respectively.

Federal Activities. The Bureau of Sport Fisheries and Wildlife's activities are grouped under four categories: recreation; environmental research, rehabilitation, and improvement; Indians and territories; and forage and timber.

Over 80% of the bureau's funds and almost 70% of its manpower were allotted in 1967 to the provision of recreational opportunities in the areas of fish and wildlife. Activities included research programs, river basin studies, waterfowl habitat acquisition and management, and hatchery fish production.

Environmental research programs were concerned with animal population control, pesticide review, mining area restoration, and the protection of rare and endangered species. Benefits from these activities include safer surroundings, protected investments, and more places of beauty.

Studies under way in 1967 were expected to enhance and conserve the fish and wildlife resources on Indian lands and to increase economic benefits. Better timber management produced salable products amounting to about 520,000 cubic feet on 65 refuges in 1967.

Tuna Research. The Woods Hole Oceanographic Institution (in 1954) and the Fisheries Research Board of Canada (in 1964) initiated marking programs to define the migratory cycles, populations, and growth rates of several large pelagic species. A joint report in 1967 presented a significant result concerning the transatlantic migration of young bluefin tuna. A study of 16 tags revealed that these had been attached to transatlantic migrants in a relatively small area, the New York Bight area, during July and August of 1966. The tuna were closely grouped when recaptured by French and Spanish fishermen in the Bay of Biscay. Except for one taken in October, the fish were caught once again in the summer months. Thus the distance between release and recovery was practically the same for each fish.

The times at large were nearly five years for two fish and averaged just over one year for the others. This signified that the ocean crossing for the latter must have been mainly between summers. Size data indicated their ages to be from two to three years.

Waterfowl. Despite a small spring increase in the duck breeding population, rapidly deteriorating nesting conditions due to drought on the Northern Prairies reduced fall flights. The 1967–68 waterfowl regulations, which all states use in selecting their hunting seasons, reduced the Atlantic and Mississippi flyway seasons by five days; and provided more protection for mallards in the Atlantic and Mississippi flyways, canvasbacks in all flyways, black ducks in the Atlantic flyway, and wood ducks in the Mississippi and Central flyways.

Fishing Records. *Field & Stream* magazine issued the first world record for redeye bass: 6 pounds ½ ounce, caught by Thomas E. Sharpe at Hallawakee Creek, Ala., on March 24.

The International Game Fish Association recognized these saltwater all-tackle records: cod (81 pounds), by Joseph Chesla at Brielle, N. J., on March 15; and Pacific blue marlin, equaling the record (1,100 pounds), by Hale L. Erickson at Kailua, Hawaii, on May 23.

Three changes appear in the American Casting Association's 1967 list of fly and bait casting records; Combined Event Records, Intermediates, Accuracy Flies—William Peters, 198 points; Skish Combined Events, Accuracy Baits for Men—B. L. Farley, 174 points; and Intermediates, All Accuracy—Steve Monnig, 233 points.

MIKE BALL
Fishing Contest Editor, "Field & Stream"

HURRICANES. See ACCIDENTS; WEATHER.

HUSSEIN, King. See biographical sketch under JORDAN.

ICELAND

The major event of 1967 in Iceland was the parliamentary election in June, but this brought no basic political changes. A variety of reform proposals were considered in the Althing (parliament), most reflecting concern over economic recession.

Domestic Affairs. Althing elections on June 11 slightly increased the majority of Premier Bjarni Benediktsson's coalition of the Independence and Social Democratic parties, and the cabinet remained in office. Several major pieces of legislation were approved by the parliament, such as lowering the voting age to 20 and continuing of economic controls. Subsidies for the fishing industry, modernization of the fishing fleet, and improvement of the fish-processing plants were motivated by grave concern for the plight of Iceland's major industry and chief source of foreign income.

Foreign Policy. Another economic problem was handled at the Nordic prime ministers' meeting at Reykjavik in October. This was the matter of securing landing rights throughout Scandinavia for Loftleidur (Icelandic Airlines). Iceland depends heavily on this company's income, and an expansion in flights would provide increased revenue. The ministers were generally favorable, but decision was deferred to the ministers of commerce. The removal of U. S. troops from the Hvalfjord air base and its transfer to NATO control marked a major improvement in U. S.-Icelandic relations, and the appointment of Karl Rolvaag as U. S. ambassador furthered the good feeling.

Economy. Because of declining world prices for fish and the poor catches of 1966 and 1967, the Icelandic economy faced a major crisis. The 1967 cod catch was the worst since 1914, and the resulting unemployment created many problems. The government supported improvements in the fleet and in the industry in general and provided price subsidies for the fishermen. The foreign reserves were expected to support this investment, although continuing inflation required control measures on wages and prices. No wage increases or new taxes were discussed during 1967.

Cultural and Social Affairs. Among the measures proposed by the Althing were increased pensions for artists and writers and prizes for outstanding productions. The gift of a priceless medieval manuscript for Iceland's national museum and news of the impending return of the medieval Icelandic documents from Denmark occasioned real celebrations. The decision to convert to right-hand driving in 1968—against the advice from Swedish experts, caused no rejoicing but led to heated argument.

RAYMOND E. LINDGREN
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ICELAND • Information Highlights

Area: 39,702 square miles (102,829 sq km).
Population: 195,000 (1966 midyear UN est.).
Chief City (1966 est.): Reykjavík, the capital, 79,202.
Government: *President*—Ásgeir Ásgeirsson (reelected to 4th 4-year term June 1964); *Premier*—Bjarni Benediktsson (took office November 1963). *Parliament*—Althing, 60 members (Upper House, 40 members; Lower House, 20 members); party seating (both houses, 1967): coalition of Independence (24) and Social Democratic (9), 33; Progressive (Farmers), 17; Labor Union (Communist), 10.
Religious Faiths: Evangelical Lutheran, 96% of population; Roman Catholics, 0.5%; others, 3.5%.
Education: *Literacy rate*, 99% of population. *Total school enrollment* (1963)—41,231 (primary, 24,997; secondary, 11,715; teacher-training, 305; technical, 3,314; higher, 900).
Finance (1967 est.): *Revenues*, $105,800,000; *expenditures*, $96,600,000; *monetary unit*, króna (43.06 krónur equal U. S.$1).
Gross National Product (1966): $476,000,000.
National Income (1965): $359,000,000; *average annual income per person*, $1,870.
Economic Indexes (1966): *Fish production*, 231 (1958=100); *cost of living*, 192 (1958=100).
Manufacturing (metric tons, 1965): Fishmeal (1967), 178,000; cement, 114,000; salted herring (1964), 41,400.
Crops (metric tons, 1965): Hay, 386,080; potatoes, 8,700; turnips, 600.
Chief Mineral (metric tons, 1965): Pumice, 10,000.
Foreign Trade (1966): *Exports*, $140,700,000 (chief exports, 1965: frozen fish fillets, $12,366,000; herring meal, $9,999,000; herring oil, $9,303,000); *imports*, $159,400,000 (chief imports, 1965: nonelectrical machinery, $9,558,000; textile fibers and products, $8,584,000). *Chief trading partners* (1966): U. S. 16.6% of exports, supplied 13.6% of imports); Britain (took 16.5% of exports, supplied 13.4% of imports); West Germany (took 8.7% of exports, supplied 12.8% of imports).
Transportation: *Roads* (1966), 8,626 miles (13,879 km); *motor vehicles* (1965), 34,959 (automobiles, 28,334); *merchant vessels* (1966), 25 (56,000 gross registered tons); *civil airlines*, Iceland Air, Icelandic Airlines; *principal airport*, Reykjavík.
Communications: *Telephones* (1966): 55,800; *radios* (1965), 58,000; *newspapers* (1965), 5 (daily circulation, 83,000).

IDAHO

Politics and forest fires dominated the headlines in Idaho in 1967. Donald Samuelson, the new conservative Republican governor, was inaugurated on January 2, and the newly reapportioned, Republican-dominated legislature convened the same day.

Legislation. Governor Samuelson, who had objected to executive leadership when he was a state senator, did not submit an itemized budget for six weeks but set a 10% increase (from $136 million to $152 million) as his goal. The legislature finally decided on a figure of about $159 million.

This lack of direction by the governor, together with a state Supreme Court decision declaring unconstitutional a law that taxes utilities at 40% of true value while taxing other property at only 20%, combined to produce a record 89-day session. Eventually the tax law problem was settled by allowing an adjustment to be effected over a 10-year period.

The legislature increased appropriations for higher education by 25% but gave public schools only a 5% increase. However, the lawmakers voted to include teachers in the new state retirement system and charge the $6.5 million cost to the state.

A bill was passed providing for phasing out of the inventory tax over a 4-year period, the loss of income to local governments to be made up with one fifth of the revenue from the 3% general sales tax. A new municipal code was enacted, allowing only one class of city and only the mayor-council and commission forms of government. Another new law raised the legal marriage age for boys from 18 to 21, and another changed the date of elections in odd-numbered years from May to November. Eight constitutional amendments were prepared for submission to the voters in 1968. These include pro-

IDAHO • Information Highlights

Area: 83,557 square miles (216,413 sq km).

Population: 699,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Boise, the capital, 54,500; Pocatello, 42,500; Idaho Falls, 38,000; Twin Falls, 21,000; Nampa, 19,600; Coeur d'Alene, 14,800; Caldwell, 13,500.

Government: *Chief Officers*—governor, Donald Samuelson, (Republican); lt. gov., Jack M. Murphy (R); secy. of state, Pete T. Cenarrusa (R); atty. gen., Allan G. Shepard (R); treas., Marjorie Ruth Moon; supt. of pub. inst., D. F. Engelking; chief justice, C. J. Taylor. *Legislature* (convened Jan. 2, 1967): Senate, 35 members (22 Republicans, 13 Democrats); House of Representatives, 70 members (39 R, 31 D).

Education: *School enrollment* (1965–66)—public elementary, 100,170 pupils (3,650 teachers); public secondary, 83,387 pupils (3,530 teachers); nonpublic, 10,300 pupils (410 teachers); college and university (fall 1965), 20,788 students. *Public school expenditures* (1965–66)—$64,789,000 ($388 per pupil); average teacher's salary, $5,685.

Public Finance (fiscal year 1965): *Revenues*, $196,195,000 (motor fuel tax, $17,600,000; federal funds, $56,374,000). *Expenditures*, $182,239,000; (education, $47,069,000; health, welfare, and safety, $28,469,000; highways, $58,701,000). *State debt*, $1,111,000 (June 30, 1965).

Personal Income (1966): $1,704,000,000; average annual income per person, $2,445.

Public Assistance (fiscal 1967): $17,431,666 to 18,855 recipients (aged, $3,168,961; dependent children, $6,006,355).

Labor Force (employed persons, calendar year 1966): *Agricultural*, 50,200; *nonagricutural* (wage and salary earners), 267,900 (19.3% manufacturing, 24.4% trade, 22.7% government). *Unemployed persons* (1966)—11,100.

Manufacturing (1965): Value added by manufacture, $436,362,000 (transportation equipment, $6,850,000; lumber and wood products, $101,698,000; nonelectrical machinery, $5,437,000; chemicals and allied products, $95,046,000; food and products, $129,441,000).

Agriculture (1966): *Cash farm income*, $579,543,000 (livestock, $239,854,000; crops, $302,110,000; govt. payments, $37,579,000). *Chief crops* (tons)—potatoes, 3,302,500 (ranks 1st among the states); sugar beets, 2,322,000 (rank, 3d); hay, 3,123,000; wheat, 1,148,340; barley, 562,440.

Mining (1966 est.): *Production value*, $105,609,000. *Chief minerals* (tons)—sand and gravel, 9,500,000; stone, 1,500,000; lead, 68,865; zinc, 60,490; clays, 44,000; silver, 19,382,000 troy ounces; gold, 4,043 troy ounces.

Fisheries (1965): *Commercial catch*, 1,394,000 pounds ($75,000,000).

Transportation: *Roads* (Dec. 1966), 53,591 miles (86,228 km); *motor vehicles* (1966), 486,289; *railroads* (1966), 2,956.1 line miles (4,756 km) *airports with scheduled services* (1967), 9.

Communications: *Telephones* (1966), 276,900; *television stations* (1967), 6; *radio stations* (1967), 43; *newspapers* (1967), 11 (daily circulation, 133,797).

visions for annual legislative sessions and for allowing legislators to set their own salaries. On June 19 the legislature held a special session to appropriate funds to meet an emergency in the public assistance department, caused by the legislature's failure to appropriate money to match federal funds.

Forest Fires. Idaho was plagued by forest fires during an extremely dry August and September, and fire-fighting funds soon were exhausted. Governor Samuelson asked President Johnson to declare Idaho a disaster area, but the President refused because human life was not threatened. Intervention by Sen. Frank Church brought a $250,000 appropriation.

Attempted Recall of Senator Church. On May 7 a local right-wing group known as the Committee for Victory in Vietnam filed initiatory recall papers against Idaho's senior U. S. senator, Democrat Frank Church. The move was inspired by the senator's opposition to escalation of the war. The filing of the papers led immediately to the question of whether a state's recall laws can be used to remove a U. S. senator or representative. Acting on his opinion that it could not be so used, Idaho's attorney general advised the secretary of state not to accept the papers. The group then sought to compel acceptance, but a U. S. district judge ruled on September 30 that state recall of a U. S. senator would violate the provision of the U. S. Constitution that Congress shall be the sole judge of its members.

CLIFFORD DOBLER
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ILLINOIS

The question of open housing was a major issue in Illinois in 1967, particularly in the 75th General Assembly which convened on January 4. Although the Assembly was newly reapportioned on a "one man, one vote" basis, there was no evidence that such apportionment resulted in more "urban legislation" than in previous sessions. One indication of this was the fate of the open-occupancy question.

Open Housing. When the Assembly failed to pass any occupancy law in its regular session the issue was renewed in a fall session, but all attempts to introduce such legislation were blocked. Some civil rights groups sought unsuccessfully to have Congress withhold approval of Weston, Ill., as the site of the Atomic Energy Commission's proposed atom smasher (see below), pending the state's adoption of open-housing legislation.

In September there were rock-throwing incidents, curfew violations, and a number of arrests in Aurora when the City Council rejected a fair housing ordinance. Despite inaction by the state legislature and certain city councils, the number of Illinois communities with open housing ordinances reached 26 by the end of the year. The village trustees of Weston had passed a fair-housing ordinance in February. These 26 communities represent almost half the total population of the state.

ILLINOIS • Information Highlights

Area: 56,400 square miles (146,076 sq km).

Population: 10,894,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Springfield, the capital, 87,000; Chicago, 3,520,000; Rockford, 136,000; Peoria, 100,000; Decatur, 85,000; East St. Louis, 82,000; Evanston, 81,000.

Government: *Chief Officers*—governor, Otto Kerner (Democrat); lt. gov., Samuel H. Shapiro (D); secy. of state, Paul Powell (D); atty. gen., William G. Clark (D); treas., Adlai E. Stevenson 3d; supt. of publ. instr., Ray Page; chief justice, Ray I. Klingbiel. *Legislature*—General Assembly (convened Jan. 4, 1967): Senate, 58 members (38 Republicans, 20 Democrats); House of Representatives, 177 members (99 R, 78 D).

Education: *School enrollment* (1965–66)—public elementary, 1,411,403 pupils (52,622 teachers); public secondary, 751,597 pupils (36,199 teachers); nonpublic, 599,100 pupils (17,970 teachers); college and university (fall 1965), 305,107 students. *Public school expenditures* (1965–66)—$1,165,000,000 ($612 per pupil); average teacher's salary, $7,123.

Public Finance (fiscal year 1966): *Revenues*, $1,864,774,166 (3.5% sales tax, $665,969,050; motor fuel tax, $180,295,892; federal funds, $427,975,498.) *Expenditures*, $2,083,010,353 (education, $653,148,258; health, welfare, and safety, $663,981,143; highways, $607,488,982). *State debt*, $376,730,500 (June 30, 1966).

Personal Income (1966): $38,089,000,000; average annual income per person, $3,532.

Public Assistance (fiscal year 1967): $306,201,563 to 418,903 recipients (aged, $64,469,542; dependent children, $152,809,612).

Labor Force (employed persons, June 1967): *Agricultural*, 169,000; *nonagricultural* (wage and salary earners), 4,649,800 (29.8% manufacturing, 19.3% trade, 12.2% government). *Unemployed persons* (June 1967)—155,000.

Manufacturing (1963): Value added by manufacture, $14,640,121,000 (transportation equipment, $601,088,000; primary metals, $1,176,747,000; nonelectrical machinery, $2,264,672,000; electrical machinery, $1,806,838,000; fabricated metals, $1,366,458,000; food and products, $2,059,037,000).

Agriculture (1966): *Cash farm income*, $2,884,144,000 (livestock, $1,326,109,000; crops, $1,436,982,000; govt. payments, $121,053,000). *Chief crops* (tons)—corn for grain, 23,392,320 (ranks 2d among the states); soybeans, 4,461,156 (rank, 1st); hay, 3,784,000; wheat, 1,751,520; oats, 870,720; apples, 49,200; rye, 16,464.

Mining (1966): *Production value*, $644,000,000. Chief minerals (tons)—bituminous coal, 63,212,697; stone, 47,200,000; sand and gravel, 37,251,000; clays, 2,100,000; fluorspar, 176,175; crude petroleum, 61,982,000 barrels.

Fisheries (1965): *Commercial catch*, 7,492,000 lbs. ($682,000).

Transportation: *Roads* (Dec. 1966), 128,389 miles (206,578 km); *motor vehicles* (1966), 4,945,701; *railroads* (1965), 11,005 track miles (17,710 km); *airports with scheduled service* (1966), 67.

Communications: (1966): *Telephones*, 5,823,300; *television stations*, 21; *radio stations*, 190; *newspapers*, 83 (daily circulation, Sept. 1965, 3,863,426).

UPI

MILK DUMPING by farmers in Illinois was part of a concerted effort in March by members of the National Farmers Organization to obtain a higher price for milk.

Legislative Action. Although open housing was of major concern, it was not the only legislative issue. The Republican-controlled Assembly instituted a number of procedural changes designed to make the legislative process more effective and to avoid the typical late-session logjam. For the first time in 50 years the Assembly did not adjourn indefinitely at the end of its regular biennial session on June 30. Sessions were held in the fall to review gubernatorial vetoes and to consider a small number of new bills, and another session was planned for March 1968.

Almost 20% more bills were introduced in the 1967 session than in the 1965 session. More than 2,200 bills were enacted into law—an increase of 13% over enactments in the previous session. Noteworthy measures signed into law included a registration bill for owners of firearms and legislation relating to low-income housing. Not passed was a gubernatorial proposal to raise additional revenue by broadening the sales tax to cover certain services. Instead the sales tax was increased by 1% (from 4% to 5%) and extended to only a few services. Utility, motor fuel, and cigarette taxes also were raised. Illinois cities were given an additional 0.25% of the sales tax increase, thus bringing the cities' share to 0.75% of the 5% tax.

Two significant proposals passed by the Assembly are subject to referendum, to be voted on at the 1968 general election. One is a $1 billion bond issue to alleviate the statewide problem of water pollution. The other is a constitutional convention to modernize the state constitution, which was adopted in 1870.

Politics. There were no major elections in Illinois in 1967 with the exception of the mayoralty election in heavily Negro-populated East St. Louis—where the incumbent Alvin Fields received approximately 70% of the vote against Negro challenger Elmo Bush—and the election in Chicago (see CHICAGO).

As the year ended there was increased speculation about important races that are expected in 1968. U. S. Sen. Everett M. Dirksen (Republican), the Senate minority leader, will stand for reelection to another 6-year term. The governor's office also will be contested, but it was not clear whether Gov. Otto Kerner would seek a third term. Governor Kerner received wide publicity as a result of his appointment by President Johnson on July 27 as chairman of the Special Presidential Advisory Commission on Civil Disorders.

Civil Disturbances. A number of Illinois cities experienced sporadic incidents of racial disturbance in 1967. Governor Kerner sent National Guardsmen into Cairo, a small city at the southern tip of Illinois, when charges of police brutality developed into three nights of rioting there in mid-July. Complaints that there were no Negroes in a homecoming queen contest led to disturbances in a high school in Maywood, a suburb of Chicago. Racial incidents also occurred in Waukegan, Evanston, Peoria, Rockford, Elgin, and Madison.

Teachers' Strikes. In East St. Louis, 600 of the school system's 850 teachers went on strike before the 1967–68 school year began. The striking teachers, members of a local affiliate of the American Federation of Teachers, returned to the classrooms on September 12 after agreeing with the board of education to submit the salary issue to a fact-finding committee.

Atom Smasher. The Atomic Energy Commission authorization bill, which was signed in July by President Johnson, included a $7.3 million allocation for planning the proposed atom smasher at Weston. In October, Governor Kerner appointed a nine-man group to clear the way for state acquisition of a 6,800-acre site for the facility. (See also ATOMIC ENERGY.)

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IMMIGRATION

A record number of persons were inspected and admitted into the United States during the fiscal year ending June 30, 1967. The all-time high of more than 206,800,000 persons exceeded the previous year's figure of 197,000,000 by 5%. Multiple crossings over the Canadian and Mexican land borders, and multiple landings of crewmen, accounted for 96% of the total number of persons admitted. Alien admissions exceeded 120,000,000, while U. S. citizen admissions totaled 86,600,000.

Immigration Regulation. The Immigration and Nationality Act of Oct. 3, 1965, set a numerical limitation of 170,000 imigrants for countries outside the Western Hemisphere. After a transition period ending June 30, 1968, there will be an annual ceiling of 120,000 immigrants for countries of the Western Hemisphere, if not provided otherwise by Congress. Within the numerical limitations, priority preferences are made for relatives of citizens and resident aliens, and aliens with talents and skills needed in the United States.

Until July 1, 1968, visa numbers not used in one year are placed in a pool from which preference visa numbers may be drawn in subsequent years. The act exempts from numerical limitations "immediate relatives" (children, spouses, and parents of U. S. citizens) and "special immigrants," which includes natives of the Western Hemisphers, returning resident aliens, ministers of religion, and others.

Section 212(a)(14) of the Immigration and Nationality Act of 1952, as amended by the act of Oct. 3, 1965, provides that aliens who are coming to the United States to be gainfully employed are ineligible for the issuance of an immigrant visa unless the secretary of labor has certified that there is a shortage of qualified workers in the fields in question in the United States and that the alien's employment will not adversely affect the wages and working conditions of persons employed in similar occupations in the United States.

TABLE 1—IMMIGRANT ALIENS ADMITTED TO THE UNITED STATES
(Year ended June 30, 1967)

Country or region of birth	Total admitted	Quota immigrants	Nonquota immigrants
All countries	361,972	153,079	208,893
Europe	139,514	102,871	36,643
Austria	1,101	804	297
Czechoslovakia	1,406	1,042	364
Denmark	1,158	881	277
France	3,440	2,035	1,405
Germany	16,041	7,353	8,688
Greece	14,905	11,986	2,919
Hungary	2,016	1,315	701
Ireland	2,624	2,285	339
Italy	26,565	19,970	6,595
Netherlands	2,039	1,573	466
Norway	1,341	1,168	173
Poland	5,976	4,565	1,411
Portugal	13,927	12,274	1,653
Sweden	1,763	1,597	166
United Kingdom	24,965	20,918	4,047
USSR (Europe and Asia)	1,033	632	401
Yugoslavia	5,879	4,221	1,658
Other Europe (includes Turkey in Asia)	13,335	8,252	5,083
North America	140,138	3,764	136,374
Canada	23,442	—	23,442
Mexico	42,371	—	42,371
Cuba	33,321	—	33,321
Other West Indies	31,952	2,985	28,967
Central America	8,709	699	8,010
Other North America	343	80	263
South America	16,517	240	16,277
Asia	59,233	41,467	17,766
Africa	4,236	3,132	1,104
Oceania	2,328	1,600	728
Australia	1,247	835	412
New Zealand	414	244	170
Other Oceania	667	521	146
Other countries	6	5	1

Source: U. S. Department of Justice, Immigration and Naturalization Service.

Table 2—PRINCIPAL COUNTRIES OF FORMER ALLEGIANCE OF PERSONS NATURALIZED IN THE UNITED STATES
(Years ended June 30, 1964-67)

Country or region of former allegiance	1964	1965	1966	1967
All countries	112,234	104,299	103,059	104,902
Europe	71,636	66,020	62,410	61,536
Austria	1,196	1,063	1,012	973
Czechoslovakia	681	658	551	458
France	1,697	1,521	1,446	1,474
Germany	16,646	14,929	13,706	13,208
Greece	3,366	3,256	3,373	3,439
Hungary	4,723	4,054	2,971	2,374
Ireland	3,697	3,322	2,885	3,083
Italy	12,323	10,742	10,981	10,571
Latvia	624	545	388	353
Netherlands	2,748	2,503	2,762	2,698
Poland	3,969	4,017	3,833	4,072
United Kingdom	9,826	9,370	8,930	8,775
USSR	1,329	1,071	848	874
Yugoslavia	1,965	2,013	1,764	1,975
Other Europe	6,846	6,956	6,960	7,209
Asia	15,724	14,680	14,369	14,261
China (including Taiwan)	4,045	3,692	3,111	2,923
Israel	3,029	2,883	2,814	2,276
Japan	3,061	2,660	2,673	2,553
Philippines	2,274	2,499	2,384	2,958
Other Asia	3,315	2,946	3,387	3,551
North America	19,782	18,626	20,899	22,587
Canada	9,479	8,489	8,579	8,118
Mexico	5,213	5,080	5,677	6,041
Cuba	2,683	2,522	3,829	5,485
Other North America	2,407	2,535	2,814	2,943
South America	2,139	2,136	2,538	3,065
Other countries	2,953	2,837	2,843	3,453

Source: U.S. Department of Justice, Immigration and Naturalization Service.

Immigrants. A total of 361,972 aliens were admitted to the United States for permanent residence in the fiscal year 1967. This exceeded the 1966 figure by 12% and was the largest number admitted since 1924, the last fiscal year before an annual quota of 163,000 was established. Of the total, 290,007 obtained immigrant visas abroad and were newly admitted, while 71,965 were already living in the United States and adjusted their status. Cuban refugees qaulifying for benefits under the Cuban Refugee Act of Nov. 2, 1966, accounted for 25,752 of the total number of adjustments.

Immigrants exempt from numerical limitations totaled 208,893. Included were 46,904 "immediate relatives" and 126,370 "special immigrants," most of whom were natives of Western Hemisphere countries. The 18% decrease in "special immigrants" is due largely to the labor certification requirement, which often cannot be met by applicants in unskilled or semiskilled occupations. Parents of U. S. citizens numbered 8,803, compared with 3,799 in 1965 when, before the new law was passed, they were subject to quotas.

Immigrants subject to numerical limitations totaled 153,079. This increase of 18% over the fiscal year 1966 is accounted for in large measure by the relative preferences and visa pool provisions of the 1965 act. Countries of southern Europe and Asia benefited most by these provisions. During the year, 79,672 close relatives of U. S. citizens and permanent resident aliens were admitted to the United States under preference provisions, a 31% increase over 1966.

Under the occupational preference provisions, a total of 14,885 aliens with professional skills or other needed occupations were admitted in the fiscal year 1967. They were accompanied by 10,478 spouses and children. Within the preferential categories, 6,651 refugees were also admitted into the United States or adjusted their immigration status. Immigrants admitted under the Immigration and

Nationality Act's limitation of 170,000 within the nonpreference categories declined from 53,700 in 1966 to 40,635 in 1967, indicating a growing use of the preference provisions of the law.

Nonimmigrants. Nonimmigrants are aliens admitted to the United States for temporary periods of time. Exclusive of the multiple entries at land borders and of alien crewmen, 2,608,193 nonimmigrants came to the United States as tourists, students, exchange visitors, aliens in transit, and representatives of foreign governments. This was an 11% increase over the fiscal year 1966. Tourists, mostly from Canada, Mexico, the United Kingdom, and Germany numbered 1,628,638. Students totaled 63,370; exchange visitors, 38,630; temporary workers and trainees, 70,010; aliens in transit, 204,936; visitors admitted on a temporary basis to conduct business with U. S. firms, 220,361; and foreign government and NATO officials, 45,358.

Deportable Aliens. The number of deportable aliens located was 161,608, a 17% increase over 1966. About half (81,283) were aliens who became deportable by violating the status for which they were admitted. The remainder (80,325) were aliens who entered the United States illegally. Mexican aliens accounted for 67% of all deportable aliens located. Aliens deported numbered 9,260, and those required to depart without formal proceedings totaled 142,343.

Naturalizations. In the fiscal year 1967, 104,902 persons were naturalized. Included were 78,544 persons whose petitions were granted under the general provisions of the law; 23,518 spouses and children of U. S. citizens; 2,691 who entered under special provisions for military personnel; and 149 others. Certificates of citizenship were awarded to 15,918 children born abroad to American parents and to 17,205 persons who acquired citizenship through the naturalization of parents.

RAYMOND F. FARRELL
Commissioner of Immigration and Naturalization
U. S. Department of Justice

INCOME

National income in the United States increased at a much slower pace in 1967 than it had during any of the three preceding years. National income is the aggregate earnings of labor and property that are derived from the current production of goods and services by the nation's economy.

The slowing in the growth of national income reflected a drop in output during the opening quarter of the year as business firms sharply reduced the rate at which they added to inventories. Production recovered modestly during the second quarter, and, despite widespread strikes, it expanded vigorously in the second half of the year.

The first-half weakness in production held down the contribution of real output to the growth in national income. Increases in final-product prices, however, were larger in 1967 than in 1966, and they contributed a larger share to the observed growth in national income during 1967 than in 1966. Because of accelerated price rises and the resumption of economic expansion in the second half of 1967, there was widespread public debate on the adoption of appropriate fiscal and monetary policies to moderate inflation without inhibiting economic growth.

National Income. The national income of the United States, about $650 billion in 1967, was 5.3% higher than in 1966. National income had risen 9.6% in the previous year, when economic growth had been more vigorous.

NATIONAL INCOME BY TYPE OF INCOME, 1964-67
(In billions of dollars)[1]

	1964	1965	1966	1967
National income	$518.1	$562.4	$616.7	$649.6
Compensation of employees	365.7	393.9	435.7	469.6
Wages and salaries	333.7	359.1	394.6	423.7
Private	269.4	289.8	316.7	337.4
Government	64.3	69.3	77.9	86.2
Supplements to wages and salaries	32.0	34.9	41.1	45.9
Proprietors' income	52.3	56.7	59.3	58.4
Business and professional	40.2	41.9	43.2	43.6
Farm	12.1	14.8	16.1	14.8
Rental income of persons	18.0	19.0	19.4	20.1
Corporate profits and inventory valuation adjustment	66.3	74.9	82.2	79.1
Profits before tax	66.8	76.6	83.8	80.1
Profits tax liability	28.3	31.4	34.5	33.0
Profits after tax	38.4	45.2	49.3	47.2
Inventory valuation adjustment	—.5	—1.7	—1.6	—1.0
Net interest	15.8	17.9	20.2	22.4

[1] Components may not add to totals because of rounding of figures.

Source of data: Office of Business Economics, U. S. Department of Commerce.

Almost all types of income grew at a slower pace in 1967 than in 1966. Employee compensation, at $469.6 billion, was up only 7.78% in 1967, compared with a 10.5% gain registered in 1966. Nonfarm proprietors' income, at $43.6 billion, was up less than 1% in 1967; in 1966 these earnings had risen 3.25%. Net interest, at $22.4 billion, rose 10.75% in 1967; the previous year it had increased 12.75%. Farm proprietors' income did not rise in 1967; at $14.8 billion it was 8.1% below 1966. In 1966 farm income had risen 8.75%.

Corporate profits also fell in 1967. Corporate earnings of $79.1 billion were 3% lower than they had been in 1966; in the previous year profits had risen 9.75%. The only exception to the general weakening in the rate of growth of income in 1967 was the rental income of persons, which at $20.1 billion was up 3.75%, contrasted with a 2.25% gain in 1966.

Personal Income. The slowdown in the rate of increase in national income was not fully carried through to personal income, which is the current income received by persons from all sources, inclusive of transfers from government and business. Personal income, at $626.3 billion in 1967, was 7.25% above the previous year; in 1966 the rate of increase had been 8.5%. Personal income performed better than national income in 1967 for these reasons:

(1) A large share of the slowdown in national income was absorbed by the drop in corporate profits, which is not a component of personal income.

(2) Despite the drop in corporate profits, corporations stepped up their dividends by 6% to $22.8 billion.

(3) Transfer payments, at $51.9 billion in 1967, were 18.5% above 1966, while the 1966 rate of gain in transfer payments had been 10.5%.

Personal tax payments grew at a much slower pace relative to personal income than they had during 1966, because the transition to a graduated withholding system in 1966 reduced the volume of final settlements required in 1967. As a result, disposable personal income (the income of persons available for spending or saving) at $544.6 billion was 7.04% above 1966, a gain slightly below the 7.75% rise registered in 1966.

Although disposable personal income was well maintained, personal consumption expenditures rose much less than in 1966: at $491.6 billion in 1967, such outlays were up only 5.52% over 1966. In contrast, they had risen 7.5% in 1966. The fast rise in disposable personal income (faster than in consumption expenditures) was reflected in sharp gain in personal saving: at $38.7 billion in 1967, saving was up 29.8% over the 1966 figure, and the saving rate moved up from 6% to 7% of disposable personal income. This latter saving rate had not been recorded for a full year since 1958.

PERSONAL INCOME
BY STATES AND REGIONS, 1966 and 1967

Region and state	Total personal income[1] (in billions of dollars) 1966	2d quarter 1967[2]	Per capita 1966	Percent of national per capita income 1966
United States[3]	$580.5	$613.3	$2,963	100.0
New England	36.4	38.5	3,239	109.3
Maine	2.4	2.5	2,477	83.6
New Hampshire	1.9	2.0	2,808	94.8
Vermont	1.1	1.1	2,595	87.6
Massachusetts	17.7	18.7	3,271	110.4
Rhode Island	2.7	2.8	3,047	102.8
Connecticut	10.6	11.2	3,690	124.5
Mideast	138.4	147.1	3,325	112.2
New York	63.7	67.9	3,497	118.0
New Jersey	23.8	25.3	3,445	116.3
Pennsylvania	34.4	36.1	2,968	100.2
Delaware	1.8	1.9	3,529	119.1
Maryland	11.6	12.5	3,204	108.1
District of Columbia	3.2	3.4	3,948	133.2
Great Lakes	125.1	130.8	3,229	109.0
Michigan	27.7	28.9	3,269	110.3
Ohio	31.7	33.1	3,056	103.1
Indiana	15.2	15.8	3,076	103.8
Illinois	38.1	40.0	3,532	119.2
Wisconsin	12.4	13.0	2,973	100.3
Plains	45.4	47.4	2,847	96.1
Minnesota	10.4	11.0	2,904	98.0
Iowa	8.3	8.7	2,992	101.0
Missouri	12.9	13.5	2,817	95.1
North Dakota	1.5	1.6	2,384	80.5
South Dakota	1.6	1.7	2,420	81.7
Nebraska	4.2	4.3	2,905	98.0
Kansas	6.5	6.8	2,862	96.6
Southeast	97.5	103.3	2,287	77.2
Virginia	11.6	12.5	2,605	87.9
West Virginia	3.9	4.1	2,176	73.4
Kentucky	7.1	7.6	2,246	75.8
Tennessee	8.6	9.1	2,227	75.2
North Carolina	11.3	11.8	2,277	76.8
South Carolina	5.3	5.5	2,052	69.3
Georgia	10.6	11.1	2,379	80.3
Florida	15.4	16.6	2,614	88.2
Alabama	7.3	7.6	2,066	69.7
Mississippi	4.2	4.4	1,777	60.0
Louisiana	8.2	8.8	2,277	76.8
Arkansas	3.9	4.1	2,010	67.8
Southwest	39.9	42.4	2,520	85.0
Oklahoma	6.1	6.4	2,462	83.1
Texas	27.3	29.1	2,542	85.8
New Mexico	2.4	2.5	2,385	80.5
Arizona	4.1	4.4	2,544	85.9
Rocky Mountain	12.6	13.3	2,697	91.0
Montana	1.8	1.9	2,623	88.5
Idaho	1.7	1.8	2,445	82.5
Wyoming	.9	.9	2,739	92.4
Colorado	5.7	6.1	2,916	98.4
Utah	2.5	2.7	2,485	83.9
Far West[3]	82.0	87.2	3,384	114.2
Washington	9.8	10.4	3,222	108.7
Oregon	5.7	6.0	2,908	98.1
Nevada	1.5	1.6	3,497	118.0
California	65.0	69.2	3,457	116.7
Alaska	.9	.9	3,421	115.5
Hawaii	2.2	2.3	3,124	105.4

[1] Detail may not add to totals because of rounding of figures. [2] Quarterly totals, seasonally adjusted at annual rates. [3] Alaska and Hawaii included in U.S. total but not in Far West subtotal. (Source: Office of Business Economics, U. S. Department of Commerce.)

Personal Income, by States. The slowing in the growth of personal income was reflected in the figures for most states. Data for the first half of 1967 show that 36 states and the District of Columbia reported either a slower annual rate of growth than during the full year 1967 or an actual decline in income.

The slowing was particularly marked in the Plains and Southwest regions, where the decline in farm proprietors' income carried an especially heavy weight in holding down total personal income. The Great Lakes region mirrored the national movements in personal income; there a first-half-year slowdown in manufacturing activity and a decline in farm proprietors' income largely offset continued growth from other income sources.

The Mideast and Rocky Mountain regions both reported a better-than-average performance, with income gains during the first half of 1967 outstripping the 1966 rates of growth.

Gross National Product. The slowing in the rate of growth of economic activity during 1967, which led to the relatively small gains in national income, can be analyzed in term of the gross national product (GNP). The GNP is the market value of the output of goods and services produced by the nation's economy GNP rose 5.62% in 1967 to reach a total of $785.1 billion. During 1966, the rate of increase in GNP had been nearly 9%.

GROSS NATIONAL PRODUCT OR EXPENDITURE, 1964-67
(In billions of dollars)[1]

	1964	1965	1966	1967
Gross national product	$632.4	$683.9	$743.3	$785.1
Personal consumption expenditures	401.2	433.1	465.9	491.6
Durable goods	59.2	66.0	70.3	72.1
Nondurable goods	178.7	191.2	207.5	217.5
Services	163.3	175.9	188.1	202.1
Gross private domestic investment	94.0	107.4	118.0	112.1
Fixed investment	88.2	98.0	104.6	107.0
Nonresidential	61.1	71.1	80.2	82.5
Structures	21.2	25.1	27.9	26.8
Producers' durable equipment	39.9	46.0	52.3	55.7
Residential structures	27.1	27.0	24.4	24.5
Change in business inventories	5.8	9.4	13.4	5.1
Net exports	8.5	6.9	5.1	5.0
Government purchases of goods and services	128.7	136.4	154.3	176.3
Federal	65.2	66.8	77.0	89.9
State and local	63.5	69.6	77.2	86.4

[1] Detail may not add to totals because of rounding of figures. Source of data: Office of Business Economics, U. S. Department of Commerce.

The 1967 slowdown in the rate of growth in GNP reflected principally a marked reduction in the rate at which inventories were accumulated. Inventory accumulation totaled $5.1 billion in 1967, an amount only two fifths as large as the addition to inventories in 1966. Fixed investment outlays also expanded less in 1967 than in 1966; at $107 billion, such investment was up 2.29% in 1967, compared with a 6.71% rise in the previous year.

The weakness in some market categories, including personal consumption, was partially offset by faster growth in government purchases and in net exports. Federal government purchases, at $89.9 billion in 1967, were 16.75% above 1966; these outlays had risen 15.25% in the previous year.

The step-up in federal purchases occurred in the nondefense portion. Although defense spending was the fastest-rising component of GNP, its rate of growth did not accelerate over 1966. State and local governments purchased $86.4 billion of goods and services, 12% more than in 1966, when such outlays had risen 11%. Net exports, at $5 billion, were virtually unchanged from the 1966 rate; in 1966 they had declined.

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RAGHUBIR SINGH, FROM NANCY PALMER

POLLING PLACE in Old Delhi during India's fourth general election, February 15–21. The electorate totaled over a quarter of a billion persons.

INDIA

INDIA

On Aug. 15, 1967, India marked the 20th anniversary of its independence in a rather somber mood. There was a widespread feeling of disillusionment for performance had fallen short of expectations, and the country had experienced a succession of "natural calamities and human failures," to quote President Sarvepalli Radhakrishnan in his eve of Republic Day broadcast on January 25. The mood was somewhat lightened by the end of 1967; but the economic situation remained precarious, and the political outlook, which had been altered greatly by setbacks experienced by the long-dominant Congress party in the February elections, was uncertain.

DOMESTIC AFFAIRS

The fourth general election overshadowed domestic events in India in 1967. Voting was preceded by disorders, and the Congress party's reverses ushered in a new era of political instability. Nevertheless, Prime Minister Indira Gandhi retained her post, and her candidate for the presidency, Zakir Husain, was elected. Long-term issues of ethnic differences and leftist agitation provoked further strife.

Elections. The first weeks of 1967 witnessed the final and most intensive stages of the turbulent election campaign. Shortly before the voting, while addressing an election meeting in Bhubaneswar, Orissa, Prime Minister Gandhi was hit in the face by a stone, and Madhu Limaye, a prominent leader of the Samyukta Socialist party (SSP), was waylaid and beaten. For a time the agitation against the slaughter of cows threatened to develop into a major issue, but this became less significant after a Hindu holy man ended a 73-day fast on February 1.

In several states opposition parties entered into electoral arrangements and alliances. In West Bengal there were two united left fronts: one led by the Left Communists; the other by the Bangla Congress, which split off from the regular Congress party. In Kerala the Left Communists led a 7-party united front, and in Madras a strong state party, Dravida Munnetra Kazhagam (DMK), received support from diverse parties.

Between February 15 and 21 some 61% of the more than 250 million eligible voters went to the polls in the world's largest democratic elections. The balloting went off smoothly, with few irregularities and only isolated acts of violence. When the results

WIDE WORLD

INDIRA GANDHI, reelected prime minister, suffered a broken nose when hit by a stone during an election rally. With her is President Radhakrishnan, who retired in May.

became known, it was apparent that the political scene had been radically transformed.

The Congress party's share of the total popular vote, which had been about 45% in the three previous elections, fell some 5%, and the loss of seats was much greater. In the Lok Sabha (lower house) the Congress majority was reduced by some 80 seats—to 282 out of 520. The main opposition parties were the rightist Swatantra (44 seats), the Jan Sangh (35 seats), the DMK (25 seats), the SSP (23 seats), the Right Communists (22 seats), and the Left Communists (19 seats).

The Congress party found itself without a majority of seats in the legislative assemblies of 8 of the 17 states—Bihar, Kerala, Madras, Orissa, the Punjab, Rajasthan, Uttar Pradesh, and West Bengal—and ruling only a minority of the population at the state level. It fared especially poorly in Kerala and Madras. Many of the top leaders of the Congress party, including its president, K. Kamaraj Nadar, were victims of the electoral "blitz."

After the elections, non-Congress governments of many different political hues were formed in Bihar, Haryana, Madhya Pradesh, and Uttar Pradesh—the last three after the collapse of short-lived Congress governments. In Rajasthan a Congress government was installed only in late April, after five weeks of presidential rule.

Post-Election Politics. Early in March the disorganized Congress party turned to the task of selecting a new prime minister and a new government. In spite of contrary predictions, Mrs. Gandhi was reelected in a contest with Morarji Desai, who was persuaded to accept the posts of deputy prime minister and finance minister.

Early in April, President Radhakrishnan announced his plan to retire on the expiration of his 5-year term in May. There followed a two-way contest for the presidency—first within the top ranks of the Congress party and then between the Congress and the main opposition parties. An influential group within the congress, headed by its president, Kamaraj, wanted Dr. Radhakrishnan to continue, but Mrs. Gandhi led a successful fight to nominate the vice president, Zakir Husain, a prominent Indian Muslim. Then Husain had to face the challenge of Chief Justice K. Subba Rao, the presidential candidate of the major opposition parties. On May 6, Husain was elected by a considerable majority, and V. V. Giri, governor of Mysore, was elected vice president.

Internal Strife. Throughout the year the government was faced with challenges to law and order arising from demonstrations, strikes, and other forms of public protest and mass agitation, although not to the same extent as in 1966. In Kashmir serious riots broke out because of a marriage between a Hindu and a Muslim in August. In Rajasthan many lives were lost after the elections and before the imposition of presidential rule on March 13. On New Year's day 1967, Calcutta was the scene of an

INDIA • Information Highlights

ASIA
AFRICA

Area: 1,252,793 square miles (3,044,736 sq km).
Population: 498,680,000 (July 1, 1966 est.).
Chief Cities (1966 est.): New Delhi, the capital, 314,377; Bombay, 4,784,136; Calcutta, 3,049,316; Delhi, 2,440,473.
Government: *President*—Zakir Husain (took office May 13, 1967); *Prime Minister*—Mrs. Indira Gandhi (took office Jan. 24, 1966). *Parliament*—Rajya Sabha (Council of States), 238 members; Lok Sabha (House of the People), 520 members (party seating, 1967: Congress party, 282; Swatantra, 44; Communists, 41; Jan Sangh, 35; others, 118).
Religious Faiths: Hindus, 84% of population; Muslims, 11%.
Education: *Total school enrollment* (1963)—58,640,000 (primary, 42,280,000; secondary, 14,570,000; teacher-training, 140,000; technical, 340,000; higher, 1,310,000).
Finance (1966 est.): *Revenues,* $3,479,000,000; *expenditures,* $5,137,000,000; *public debt,* $14,276,000,000; *monetary unit,* rupee (7.50 rupees equal U. S.$1).
National Income (1965): $42,020,000,000; average annual income per person, $86.
Economic Indexes (1965): *Industrial production,* 171 (1958=100); *agricultural production,* 130 (1956–57=100); *cost of living* (1966), 159 (1958=100).
Manufacturing (metric tons, 1966): Cement, 11,052,000; crude steel, 6,600,000; sugar, 2,500,000; gasoline, 1,566,000; wheat flour, 1,488,000; cotton yarn, 901,200.
Crops (metric tons, 1966): Rice, 55,000,000 (ranks 2d among world producers); sorghum (1965), 7,492,000 (world rank, 2d); millet (1965), 6,504,000 (world rank, 1st); peanuts, 4,988,500 (rank, 1st); rape seed, 1,100,000 (rank, 1st).
Minerals (metric tons, 1965): Manganese ore, 1,503,990 (ranks 3d among world producers); coal (1966), 67,968,000; iron ore (1966), 26,508,000; limestone, 19,855,000.
Foreign Trade (1966): *Exports,* $1,326,000,000 (chief exports: jute manufactures, $250,000,000; tea, $181,554,600); *imports,* $2,275,964,000 (chief imports, 1965: nonelectrical machinery, $443,143,000; cereals and preparations, $412,044,000; unmilled wheat, $352,885,000). *Chief trading partners* (1965): U. S. (took 18% of exports, supplied 40% of imports); Britain (took 17% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 464,949 miles (748,242 km); *motor vehicles* (1965), 715,500 (automobiles, 370,100); *railways* (1965), 36,210 miles (58,262 km); *merchant vessels* (1966), 219 (1,853,000 gross registered tons); *national airlines,* Air India, Indian Airlines Corporation.
Communications: *Telephones* (1965): 881,407; *television stations* (1965), 1; *television sets* (1965), 800; *radios* (1966), 5,400,000; *newspapers* (1964), 514 (circ., 5,693,000).

UPI

CHINESE embassy officials in New Delhi are beaten by Indian demonstrators in retaliation for attacks on Indian diplomats in Peking. The incident occurred in June.

unusually serious riot, and after the new United Front government of West Bengal was installed the city became a center of recurrent unrest.

In June and July serious disturbances, apparently organized by Communist agitators, with possible assistance from the Chinese Communists, occurred in Naxalbari, a strategically and politically sensitive area of West Bengal, near Sikkim and Bhutan. Recurrent disturbances also broke out in the Mizo Hills area of Assam and in Nagaland.

On November 21 the central government dismissed the unstable opposition state governments in West Bengal and Haryana, claiming that circumstances there necessitated such a move. Soon after the United Front in the Punjab also fell.

The language issue continued to be a particularly sensitive one. In Hindu-speaking areas tradition-based parties such as the SSP and Jan Sangh demanded speedy changeover to Hindi, while the increased strength of the DMK gave a greater voice to opponents of "Hindi imperialism." On December 16, Parliament passed a bill retaining English as an associate national language (with Hindi, the official language) until all state legislatures agree to give it up. The government plan to replace English as the medium of instruction in universities with regional languages within 5 years led to the resignation of Foreign Minister Mahomedali Currim Chagla, who branded the plan as "hopelessly unrealistic."

Economy. During the first months of 1967 the economic outlook was grim, with the worst conditions in Bihar and eastern Uttar Pradesh. By the end of the year, however, the picture had improved considerably, largely due to the first good monsoon rains in three years and to the effective use of new seeds and fertilizers. It was estimated that food grain production for 1967 reached a record 95 million tons. The government still hoped to achieve self-sufficiency in food production by 1971.

On May 25, Finance Minister Desai presented to Parliament a "realistic" budget, calling for an expenditure of approximately $3.9 billion, nearly 40% of which was for defense. All development spending not directly aimed at increasing food production was drastically curtailed.

The fourth 5-year plan, which officially began on April 1, 1966, was in effect shelved. An annual plan envisaged an outlay of about $2.8 billion in the public sector for 1967–68. As usual, heavy reliance had to be placed on outside aid. In April a 10-nation consortium accepted a target of $1.38 billion for such aid for 1967–68.

In accordance with the recommendations of the administrative reforms commission, the role of the planning commission was considerably reduced, being confined mainly to formulating plans and evaluating performance. The membership of the planning commission was almost wholly changed, with D. R. Gadgil, a well-known economist and frequent critic of Indian planning, assuming the post of deputy chairman on September 1. Mrs. Gandhi took over the portfolio of planning minister from Asoka Mehta, who remained in the cabinet.

FOREIGN AFFAIRS

Relations with Communist China and with Pakistan remained strained. India and the United States differed over foreign policy and other matters. In the Middle East crisis, India took a strong pro-Arab stand. Efforts were made to improve relations with European Communist nations.

Conflict with China. As in previous years, India was the target of military and political pressures from Communist China in 1967. China's explosion of a hydrogen bomb on June 17 was viewed with "grave concern" by the Indian government. In June, India and China engaged in bitter diplomatic exchanges as a result of China's expulsion of two officials of the Indian Embassy in Peking, who were charged with espionage. In retaliation India levied espionage charges against Chinese diplomats in New Delhi, and expelled some of them.

On June 16 several hundred Indian students besieged the Chinese embassy in New Delhi and stoned and beat eight Chinese officials. In September and October, in the area of the Nathu La and

U. S. WHEAT, provided for the relief of famine, being weighed and distributed in Rajasthan, near New Delhi.

RAGHUBIR SINGH, FROM NANCY PALMER

Cho La passes between Tibet and Sikkim, Indian and Chinese troops were involved in the most serious clashes since the border war of 1962.

Relations with Pakistan. On Jan. 10, 1967, the first anniversary of the Tashkent Declaration, and on other occasions throughout the year, Prime Minister Gandhi and other government spokesmen reaffirmed India's desire for cooperation and peaceful relations with Pakistan and expressed regret that, in their judgment, Pakistan had not reciprocated. Further steps were taken to resume contacts that had existed prior to the fighting in 1965.

The Svetlana Case. In March a diplomatic furor was stirred up by the request of Mrs. Svetlana Alliluyeva, daughter of the late Soviet dictator Joseph Stalin, for asylum in the American Embassy in New Delhi and by her departure from India without the knowledge of either Russian or Indian officials. Mrs. Alliluyeva had gone to India on Dec. 20, 1966, with the ashes of her late Indian husband, Brajesh Singh, the uncle of Dinesh Singh, then a minister of state—and later minister of commerce—and a confidant of Prime Minister Gandhi. The Svetlana case was the subject of criticism in the Indian parliament, and it led to Soviet protests to India and Indian protests to the United States. (See also biographical sketch of Mrs. Alliluyeva under UNION OF SOVIET SOCIALIST REPUBLICS.)

Stand on Middle East. In May, as the Israeli-Arab crisis was building, the Indian government protested an Israeli attack on Indian members of the UN Emergency Force, and upheld UAR President Nasser's closing of the Gulf of Aqaba. India was one of the most vocal supporters of the UN Security Council's call for an immediate cease-fire and withdrawal to positions held prior to the outbreak of hostilities and of the draft resolution along these lines adopted by an emergency special session of the UN General Assembly. Its position in this crisis aroused more internal opposition than almost any other foreign policy issue since independence.

Relations with the United States. Mutual criticism and sensitivity upset relations between India and the United States in 1967. Indians were disturbed by delays in American food shipments to India, which eventually amounted to some 6.6 million tons. It was charged that the U. S. Central Intelligence Agency had intervened in India's elections by providing funds for opposition parties and individual members of the Congress party—an allegation denied by U. S. Ambassador Chester Bowles and by all the Indian parties and leaders named.

YOUNG VICTIMS of the famine in Bihar, northwest of Calcutta, listlessly await the distribution of food rations.

RAGHUBIR SINGH, FROM NANCY PALMER

India also objected to the U. S. announcement of April 12 that the ban on military aid to both India and Pakistan would continue, with consideration of requests for spare parts on a case-by-case basis; to trends in the United States toward protectionism and curtailment of foreign aid; and to U. S. conduct of the war in Vietnam. Americans, in turn, were impatient with India's apparent weakness in leadership, failures in economic development efforts, opposition to the nuclear nonproliferation treaty, criticisms of American policies, and position on the Middle East crisis.

Diplomatic Visits. Throughout 1967 many foreign dignitaries visited India, and several Indian leaders made official visits abroad. In June and July, Foreign Minister Chagla visited several countries of Southeast Asia, and in September Deputy Prime Minister Desai toured many countries of Asia and western Europe; he also visited the United States and Brazil for meetings of the World Bank and the International Monetary Fund. In September, Mrs. Gandhi made a state visit to Ceylon, and in October to several countries of eastern Europe, with stops in the Soviet Union and the United Arab Republic.

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INDIANA

The 9-week session of the 95th General Assembly, municipal elections, and the outbreak of racial violence in July overshadowed other events in Indiana during 1967.

Legislation. The biennial session of the Indiana General Assembly, which met from January 5 to March 10, produced few significant new measures. Democratic control of the Senate and Republican domination of the House resulted in a political stalemate that was favorable to only modest innovations. The sales tax adopted in 1963, combined with gross income and other established revenues, provided an enlarged tax base which made any major change in tax levies unnecessary.

The 1967 legislature approved a biennial budget of $2.3 billion, compared with $1.7 billion for the previous biennium. Large increases were given to public schools and universities, while lesser increments went to highways and mental health programs. A precedent was established when 8% of the revenue from both sales and gross income taxes was earmarked for return to local governments to help restrain soaring property tax levies. Some revenue was lost through reductions on state income tax returns for donations to colleges and universities.

Reapportionment. Legislative reapportionment, achieved by the 1965 Assembly, gave citizens of urban areas an increased voice in the 1967 session. In a January ruling, however, the U. S. Supreme Court vacated a lower court ruling that upheld the 1965 congressional redistricting act, and ordered the lower court to reconsider the law. Congressional reapportionment became an unresolved bone of contention in the 1967 legislature.

Following the session, a bipartisan committee chosen by the General Assembly made repeated but unsuccessful efforts to break the deadlock. As the year ended, legislative leaders were making another attempt to find a solution.

Elections. In the November 7 elections, Richard D. Hatcher, a Democrat, defeated his Republican opponent, Joseph B. Radigan, by a slim margin to become mayor of Gary, the state's second largest city. His election to the office was the first such victory for a Negro in an Indiana municipality. The election of Negroes to various city councils in November was less unusual.

INDIANA • Information Highlights

Area: 36,291 square miles (93,994 sq km).
Population: 4,999,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Indianapolis, the capital, 530,000; Gary, 179,000; Fort Wayne, 172,000; Evansville, 138,500; South Bend, 135,000; Hammond, 115,500; Muncie, 70,500; Terre Haute, 70,500.
Government: *Chief Officers*—governor, Roger D. Branigin (Democrat); lt. gov., Robert L. Rock (D); secy. of state, Edgar D. Whitcomb (Republican); atty. gen., John J. Dillon (D); treas., John K. Snyder; supt. of pub. instr., Richard D. Wells; chief justice, chair rotates among justices in May & Nov. of each year. *Legislature*—General Assembly (convenes Jan. 9, 1969): (met Jan. 5,–March 6, 1967): Senate, 50 members (21 Republicans, 29 Democrats); House of Representatives, 100 members (66 R, 34 D).
Education: *School enrollment* (1965–66)—public elementary, 724,000 pupils (24,720 teachers); public secondary, 451,000 pupils (20,265 teachers); nonpublic schools, 149,100 pupils (5,050 teachers); higher (fall 1965), 142,113 students. *Public school expenditures* (1965–66)— $532,614,000 ($512 per pupil); average teacher's salary, $7,050.
Public Finance (fiscal year 1967): *Revenues*, $999,517,543 (2% sales tax, $172,702,814; motor fuel tax, $130,050,361; federal funds, $188,268,454). *Expenditures*, $983,578,376 (education, $406,416,421; health, welfare, and safety, $140,079,930; highways, $291,730,151). *State debt*, $508,206,000 (June 30, 1967).
Personal Income (1966): $15,230,000,000; average annual income per person, $3,076.
Public Assistance (fiscal year 1967): $51,097,282 to 72,830 recipients (aged, $22,258,787; dependent children, $19,879,376).
Labor Force (employed persons, July 1967): *Agricultural*, 66,900; *nonagricultural* (wage and salary earners), 1,773,900 (36.7% manufacturing, 17.2% trade, 13.6% government). *Unemployed persons* (July 1967)—77,600.
Manufacturing (1963): Value added by manufacture, $7,726,942,000 (transportation equipment, $1,119,585,000; primary metals, $1,456,412,000; nonelectrical machinery, $678,261,000; electrical machinery, $1,125,703,000.
Agriculture (1966): *Cash farm income*, $1,552,758,000 (livestock, $799,691,000; crops, $660,976,000; govt. payments, $92,091,000). *Chief crops* (tons)—corn for grain, 11,088,168 (ranks 3d among the states); soybeans, 2,048.592 (rank, 6th); popcorn, 52,500 (rank, 2d); hay, 2,402,000; wheat, 1,264,560; oats, 293,760; potatoes, 88.850.
Mining (1966): *Production value*, $283.091,950. *Chief minerals* (tons)—sand and gravel, 26,521,056; crushed limestone, 23,873,448; coal, 17,072,941; clay and shale, 2,103,931; cement, 33,631; crude petroleum, 10,616.748 barrels.
Transportation: *Roads* (1967), 90,592 miles (145.763 km); *motor vehicles* (1966), 2.808.505; *railroads* (1966), 6,590 first main line miles (10,605 km); *airports* with scheduled service (1967), 10.
Communications: (1966): *Telephones*, 2,262,200; *television stations*, 18; *radio stations*, 130; *newspapers*, 329 (daily circulation, 3,291,445).

The municipal elections netted further gains for the Republicans, who already held most Indiana towns and cities. Their victories in Indianapolis, the state capital and Indiana's largest city, and in Terre Haute, a longtime Democratic stronghold, however, were largely offset by Democratic triumphs in Gary, Muncie, Richmond, and other cities.

Racial Unrest. On July 25, bands of Negro youths roamed through South Bend, throwing rocks and fire bombs. On the second night of violence, Gov. Roger D. Branigin ordered 1,000 National Guardsmen into the city shortly after Mayor Lloyd Allen had imposed a curfew. By July 28 the situation was under control. Except for the outbreak of violence in South Bend, and state avoided severe and costly urban riots during the year.

Other Events. Cancellation of passenger service on the Monon Railroad in September ended more than a century of service on the famous Hoosier line.

A long-simmering debate on bank interest reached a climax in December when increases made Indiana banks competitive with those of other states.

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INDONESIA

ATTACKED during bloody riots in the Indonesian capital of Djakarta in April, a Chinese youth is given aid by Indonesian soldiers.

UPI

INDONESIA

General Suharto and his government continued to struggle with Indonesia's grave political and economic problems throughout 1967. Indonesia resumed its participation in international organizations. Having reentered the United Nations in the fall of 1966, it rejoined the International Monetary Fund on Feb. 21, 1967, and the World Bank on April 13. Indonesia's relations with Communist China steadily worsened during 1967, and in October diplomats from both nations returned home. The year also saw the final fall from power of President Sukarno, after 21 years of leadership.

Sukarno. At the beginning of the year President Sukarno remained a threat to the new regime and its program, but a frontal attack by Suharto on the man who since 1945 had been the charismatic leader of millions of Indonesians would have plunged the country into civil war. Sukarno had strong support in central and eastern Java, as well as in some branches of the armed forces, particularly in the air force, marines, and navy.

During the trials of the leaders of the Oct. 1, 1965, attempted coup, it was divulged that Sukarno knew of and possibly was involved in the plot. It was also charged that he had misappropriated $7 million in public funds. Anti-Sukarno sentiment mounted, and demands that he be brought to trial increased. Committed to constitutional procedures, Suharto wanted the removal of Sukarno to come as an expression of the people's will. At first Sukarno refused to resign, but finally on February 20 he transferred his executive powers to Suharto.

On March 12 the People's Consultative Congress, originally handpicked by Sukarno, formally stripped him of all executive powers and remaining titles, retroactively to February 22. He was also forbidden to engage in any political activities until after the next general election. General Suharto became the acting president and will hold the title until elections for president are held.

Politics. The Suharto government pledged to follow the principles of the revolution as expressed in the *Pantjasila,* the 5-point state philosophy first expressed by Sukarno. It listed Indonesia's guiding principles as belief in God, democracy, social justice, humanitarianism, and nationalism.

UPI

SUHARTO, de facto ruler of Indonesia since March 1966, took over the remaining executive powers from President Sukarno on Feb. 20, 1967, and was appointed acting president by the People's Consultative Congress on March 12. A political moderate, he has aimed his policy at achieving economic stability and preventing a resurgence of Communist forces. Although his foreign policy centers around friendly relations with the West and safeguards against threats from Communist China, his policy is one of nonalignment.

Suharto was born in Djokjakarta, Java, on June 8, 1921. Educated in military schools, he served briefly in the Dutch colonial army before the Japanese occupation and fought in the war for independence from Dutch rule after World War II. Following the establishment of the independent Republic of Indonesia in 1950, he served in various army command posts. As commander in chief of ground and air defenses he led the suppression of the Communist-inspired coup attempt of Oct. 1, 1965, and joined with other generals in establishing a military junta.

INDONESIA • Information Highlights

ASIA
AUSTRALIA

Area: 575,892 square miles (1,491,564 sq km).
Population: 107,000,000 (1966 UN est.).
Chief Cities (1961 prelim. census): Djakarta, the capital, 2,906,533; Surabaja, 1,007,945; Bandung, 972,566; Semarang, 503,153.
Government: *Acting President*—Suharto (took office March 12, 1967); *Foreign Minister*—Adam Malik (took office March 18, 1966). *Parliament*—People's Consultative Congress, 540.
Religious Faiths: Muslims, 85% of population; Hindus, 6%; Christians, 4%; others, 5%.
Education: *Literacy rate* (1961), 43% of population aged 15 and over. *Total school enrollment* (1961)—10,592,370 (primary, 9,642,886; secondary, 754,434; teacher-training, 38,593; technical, 90,822; higher, 65,635).
Finance (1966 est. value in rupiahs): *Revenues*, 13,400,000,000 rupiahs; *expenditures*, 29,000,000,000 rupiahs.
Gross National Product (1965): $10,500,000,000.
National Income (1965): $8,909,000,000; average annual income per person, $85.
Economic Indexes: *Agricultural production* (1965), 112 (1956–57=100); *cost of living* (1964), 2,615 (1958=100).
Manufacturing (metric tons): Gasoline (1963), 1,802,000; beer (1962), 19,300; lumber (1963), 1,765,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Cassava (1965–66), 13,039,000 (ranks 2d among world producers); rubber, 853,200 (world rank, 2d); rice, 14,103,000; peanuts, 419,000.
Minerals (metric tons, 1965): Crude petroleum (1966), 23,520,000; tin (1966), 12,732.
Foreign Trade (1965): *Exports*, $707,000,000 (chief exports, value in rupiahs, 1965: crude petroleum, 12,237,400,000 Rp.; natural rubber and gums, 9,472,000,000 Rp.; tin ore and concentrates, 1,706,500,000 Rp.; *imports* (1964), $691,000,000 (chief imports, value in rupiahs, 1964: rice, 7,377,000,000 Rp.; cotton fabrics, 1,378,400,000 Rp.; crude petroleum, 372,800,000 Rp.). *Chief trading partners* (1965): Japan (took 16% of exports, supplied 41% of imports); U. S. (took 22% of exports, supplied, in 1964, 12% of imports).
Transportation: *Roads* (1964), 6,146 miles (9,891 km); *motor vehicles* (1965), 169,708; *railways* (1965), 3,788 miles.

In 1967, Suharto failed to stimulate the development of new political parties to oppose the parties that remained from Sukarno's regime. In May the acting president strengthened his government by shifting the top army officers, and in a cabinet reshuffle on October 11, he abolished a 5-man inner cabinet, the Presidium. All ministers who formerly reported to the Presidium henceforth became responsible to Suharto. Key ministers remained in their posts, and Suharto retained the most vital position, that of minister coordinator for defense and security.

A general election was promised for August 1968, but Parliament adjourned in April without enacting the legislation that must be passed 18 months before the election date. The politicians opposed the military's demand for a guarantee of 25% of the seats in a future parliament. Nonmilitary members were concerned that the military would take over completely. Nearly half of the top cabinet and subministerial positions, as well as 20 of Indonesia's 36 ambassadorial posts, are filled by the military.

The Chinese in Indonesia. One of Indonesia's biggest economic and political problems involves race relations. Of the nearly 3 million Chinese in Indonesia, one third are Indonesian citizens. About one half of the Chinese are stateless and, by agreement with Peking, may not become Indonesian citizens. The Indonesians have long resented the Chinese, who dominate the retail business of the country and control a considerable part of its economic life. The Indonesians, moreover, cannot presently replace either Chinese skill or capital. Regardless of this fact, local military commanders have taken repressive measures. In some instances they have attempted to deport Chinese residents, and in others, they have barred them from wholesale and retail trade. This seriously affected many Indonesians, who were then unable to sell their fish or crops.

Relations with Peking. Following the attempted coup by pro-Peking Indonesian Communists in 1965, relations between Peking and Djakarta have steadily deteriorated. Accusations that the Chinese in Indonesia financially supported and sympathized with the Indonesian Communist party increased the tension. The government's vacillating policy of sometimes encouraging and sometimes restraining attacks on the Chinese did not help to alleviate the problem.

In April a Chinese who had been arrested as a suspected Communist agent died in jail, and a large group of Chinese demonstrated against Suharto's government. As a result, a mob of 2,000 Indonesians invaded the Chinese section of Djakarta, beat the inhabitants and looted the stores. The riots were contained after Foreign Minister Malik and other moderates intervened. Two Chinese officials were expelled on charges of subversion. To ease the problem, the extension of Indonesian citizenship to acceptable stateless Chinese was considered.

Hostilities flared again when, on August 5, some 500 young Indonesians attacked the Chinese embassy in Djakarta, and three youths and a soldier were shot. Indonesia again expelled Chinese diplomats, and Peking in reprisal restricted the personnel of the Indonesian embassy and refused them exit permits. Immediately demands were renewed for severing diplomatic relations with Communist China. Another mob stormed the Chinese embassy on October 1, burned one of the buildings, and destroyed Chinese equipment. On October 31 the diplomatic staffs of both countries returned home, and diplomatic relations were suspended.

Foreign Policy. Suharto announced that Indonesia's foreign policy would be one of nonalignment. At

INDONESIANS of Chinese origin in 1967 had to change their names from Chinese to Indonesian or be deported.

UPI

Bangkok in early August, Indonesia joined Singapore, the Philippines, Malaysia, and Thailand in forming the Association of Southeast Asian Nations. The organization is intended to promote economic, social, cultural, and technical cooperation among its members.

Economy. The stagnant economy slowly responded to governmental measures to spur recovery. At a meeting in Paris in December 1966, Indonesia's Western creditors provided a breathing space by rescheduling the country's debts. The Communist creditors granted a moratorium. Representatives of Indonesia's 14 creditor nations met in Amsterdam in February and agreed that instead of being given project aid, Indonesia should be granted the financial assistance necessary to make up the anticipated $200 million foreign exchange deficit.

In Scheveningen, the Netherlands, in June, Indonesia's creditor nations reported favorably on economic progress made during the preceding five months. Following guidelines laid down by the International Monetary Fund, the government made some headway toward economic stability. A tightening of credit was accompanied by a drop in the cost of living, although it put some shaky enterprises out of business. For the first time in years, Indonesia tried to balance its budget. Expenditures were reduced, and the military budget was cut from the 1965 figure of $414 million to $271 million for 1967. The government's primary goal for the next five years is to provide adequate food and clothing at low prices. The Suharto government promoted foreign private investment and promised to provide a favorable investment climate. It promised to return the industries seized by Sukarno, and in October the first return of a confiscated plantation was made to a U. S. company. The government stated that it hoped to make private-investment guarantee agreements with other countries similar to the one concluded with the United States on January 7.

Indonesia still lacked the technical and managerial skills needed to modernize and stabilize the economy. The chief and most insidious economic problem was inflation, which had reached incredible proportions. Failure in the 1967 rice crop caused the cost of living to rise beyond the anticipated 65% to 80%. The country was also burdened with extreme population density in Java, universal underemployment, a vast underpaid bureaucracy, and smuggling. Because the middle and lower echelons of government officials are paid extremely low salaries, "moonlighting" and bribery have remained common practices.

Amry Vandenbosch
University of Tennessee

INDUSTRIAL HEALTH AND SAFETY

"Biomedical sciences now play such a large role in national life," Dr. René Dubos, Rockefeller University scientist, said in 1967, "that the strategy for their conduct cannot be entrusted exclusively to biomedical scientists." Dr. Dubos' observation, made in a colloquium of the American College of Physicians at San Francisco in April, exemplifies a rapidly increasing public concern that the traditional attitudes of health scientists may result in inadequate protection of the health and welfare of the public.

Linton Report. Two "action goals" of particular interest to industial hygienists were included in a major report that was submitted to Secretary of Health, Education, and Welfare John W. Gardner on June 12, 1967. Recommended for accomplishment by 1970, the goals included:

(1) Extending the benefits of occupational health programs to all of the nation's 80 million employees. They now reach fewer than half.

(2) Requiring approval of all new chemicals by the Department of Health, Education, and Welfare (just as new drugs and food additives come under control of the Food and Drug Administration).

The report covered environmental pollution. It was made by a six-member special task force headed by John W. Linton, former staff director of the Senate Committee on Public Works.

Industrial Hygiene Meeting. Management of health problems arising out of industry's operations, products, or wastes was discussed at the 32d annual meeting of the Industrial Hygiene Foundation. The foundation, a nonprofit research association of industries, met in Pittsburgh, its headquarters city, on Oct. 10–11, 1967.

Assistant Surgeon General Richard A. Prindle addressed the meeting and described the work of the Bureau of Disease Prevention and Environmental Control, which was established in the Public Health Service at the start of 1967. Dr. Prindle, who heads the bureau, reported that one of its five national centers concerns itself with urban and industrial health, including occupational health, accident prevention, safe water supply, solid wastes disposal, environmental engineering, and milk and food protection. The other four national centers are concerned with air pollution, radiation health, chronic disease control, and communicable diseases.

Dr. Paul Gross, director of the Industrial Hygiene Foundation Research Laboratory, received the 1967 Adolph G. Kammer Merit in Authorship Award from the Industrial Medical Association. His article, "Alveolar Clearance: Its Relation to Lesions of the Respiratory Bronchiole," was published in the *American Review of Respiratory Diseases* in July 1966. The article explains localization of silicosis and emphysema, and it deals with a new method of experimental emphysema production by injecting an enzyme (papain) directly into the trachea of the laboratory animal.

The most advanced techniques of high-resolution

INDUSTRIAL SAFETY in a modern Pennsylvania steel mill includes special protective clothing completely covering a worker who is about to tap an open-hearth furnace.

BETHLEHEM STEEL CORPORATION

electron microscopy and diffraction, as well as probe analysis, have been introduced into the study of ferruginous (so-called asbestos) bodies, which may be found in the lungs of most urbanites if sufficient care is used. Bodies that appear identical were produced experimentally by Dr. Gross from respirable filamentous dusts of clay (aluminum silicate) and abrasive (silicon carbide), as well as from glass fibers. A discussion on this subject, "Asbestos Bodies and Bio-effects—A Detective Story," was presented to the Foundation by Dr. John M. G. Davis of the University of Cambridge, England, who had collaborated with Dr. Gross in this work.

Many of the nation's 18,000 occupational health nurses can aid in industrial mental health programs. Harris H. Shettel of the American Institutes for Research described this project at the annual meeting. Begun by Industrial Hygiene Foundation in 1966 under a $639,522 grant from the National Institute of Mental Health, this project will use selected companies in the development and testing of instructional materials.

ROBERT T. P. DETREVILLE, M. D.
Industrial Hygiene Foundation of America, Inc.

INDUSTRIAL PRODUCTION

Industrial production in the United States increased slightly in 1967, tracing a pattern of slow decline in the first half of the year and general but irregular recovery in the second.

By November 1967 the Federal Reserve Board's seasonally adjusted production index stood at 159 (1957–59=100)—2.5% above the June low and about equal to the previous peak, reached in December 1966. For the first 11 months of 1967 the increase in industrial production over 1966 was 0.4%. It compared with a gain of 9% from 1965 to 1966 and an average annual increase of 7% from 1961 through 1966.

Because manufacturing capacity rose steadily while output increased more slowly, the rate of capacity utilization in U. S. factories gradually declined. The Federal Reserve reported that the utilization rate (seasonally adjusted) dropped from 90.6% in the September 1966 quarter to 83.8% in the September 1967 quarter—the lowest rate since late 1963.

Major 1967 Movements. The production rate dropped in the first half of 1967, in the first significant reversal of the strong uptrend in output that began early in 1961. For the most part, the reduced rate reflected the slowing down of inventory buying from the high rate of accumulation in late 1966. A rise in output began in July. It was attributable in large part to the completion of the inventory adjustment by producers and to an improvement in overall demand, particularly for producer and consumer durables. The rate of advance in industrial operations was temporarily halted in September and October because of labor disputes in important manufacturing areas, including automobiles. With settlement of the auto and tractor strikes by early November and with widespread increases in demand for final products, the pace of the advance quickened late in 1967.

Consumer goods output in 1967 held at around the 1966 level despite an appreciable decline in autos and household appliances. Output of equipment, including defense products, increased. Industrial materials showed little change over the year.

Of the four broad industry groups—durable goods, nondurable goods, mining, and utilities—only durable goods remained below the 1966 rate of output, and that group was only slightly lower. For the 21 major manufacturing divisions, production increases over the year about equaled decreases. Most of the decreases occurred in the durable goods sector. In the closing months of 1967, about half of the industries operated at new highs or close to earlier highs.

Durable Manufactures. Production of primary metals fell in volume in 1967 mainly because of lower output of iron and steel. Raw steel production generally remained well below that of most months of 1966. It totaled about 127 million tons for all of 1967, some 5% under the record volume of 134 million tons in 1966. The decline in output reflected reduced demand from such important consuming markets as construction, motor vehicles, appliances, and railroad equipment.

Although overall demand for finished steel products in 1967 was below that of 1966, U. S. imports of foreign-produced steel were maintained at a high rate in the first 10 months of 1967. Steel imported in this period totaled 9.1 million tons, 300,000 tons more than in the corresponding 1966 period. The January-October steel inflow equaled about 13% of shipments by domestic mills, somewhat above the 1966 rate.

In nonferrous metals, mixed trends prevailed in 1967, and total output was lower than in 1966. Production of primary aluminum increased to a new high. Operations of lead and zinc producers showed little change. Copper activity was sharply curtailed by a work stoppage that encompassed virtually all of the industry. The copper strike began in mid-July and continued for the rest of 1967. Demand for copper exceeded total supplies (domestic production plus imports) for the fifth year in a row. The shortage of refined copper was made up by increased imports, from inventories, and from releases from the U. S. government stockpile.

ANNUAL SURVEY OF MANUFACTURES, 1966[1]

Industry Group	Number of employees	Payroll (millions)	Value added by manufacture (millions)
All manufacturing establishments, including administrative and auxiliary units, total	19,121,528	$125,561	$251,014
Operating manufacturing establishments	18,205,253	116,277	251,014
Food and kindred products	1,642,145	9,542	24,896
Tobacco manufactures	72,363	356	1,872
Textile mill products	927,339	4,243	8,028
Apparel and related products	1,359,833	4,539	9,221
Lumber and wood products	569,837	2,689	4,786
Furniture and fixtures	428,125	2,186	3,978
Paper and allied products	633,939	4,236	9,417
Printing and publishing	1,017,581	6,751	13,264
Chemicals and allied products	822,491	6,130	22,812
Petroleum and coal products	140,765	1,128	4,737
Rubber and plastics products	491,823	3,072	6,277
Leather and leather products	341,078	1,426	2,481
Stone, clay, and glass products	618,550	3,838	8,495
Primary metal industries	1,296,541	9,913	20,908
Fabricated metal products	1,252,294	8,245	15,792
Machinery, except electrical	1,804,255	13,474	27,041
Electrical machinery	1,814,302	11,985	23,544
Transportation equipment	1,890,397	15,454	29,250
Instruments and related products	362,504	2,521	5,845
Miscellaneous manufacturing	418,563	2,153	4,394
Ordnance and accessories	300,528	2,395	3,973
Administrative and auxiliary[2]	916,275	9,283	—

[1] Preliminary. [2] Includes storage warehouses, power plants, research laboratories, garages, repair shops, and similar facilities that serve the manufacturing establishments of a company rather than the general public. Source: U. S. Department of Commerce, Bureau of the Census.

Activity in the machinery industry reflected the slower rate of growth in business spending for new capital equipment. Expenditures in 1967 were about

$61.5 billion, only 1.5% above 1966, compared with a 16.5% rise from 1965 to 1966. Factory output of nonelectrical and electrical machinery declined 7% between October 1966, the high month, and June 1967. In the next two months it rose 3%, but then the index generally held steady at the August rate. The improvement in the last half of 1967 helped raise the total production of machinery for the year to a level just slightly below the 1966 volume.

U. S. INDUSTRIAL PRODUCTION INDEX
(1957–59 = 100)

	1960	1966	Jan.–Nov. 1967[1]
Industrial production, total	108.7	156.3	156.9
Major industry groupings			
Manufacturing, durable and nondurable	108.9	158.7	158.4
Mining	101.6	120.3	123.5
Utilities	115.6	173.4	183.3
Major marketing groupings			
Final products, total	109.9	155.4	157.4
Consumer goods	111.0	147.4	147.4
Equipment	107.6	172.6	179.0
Materials	107.6	157.1	156.4

[1] Seasonally adjusted. (Source: Board of Governors of the Federal Reserve System.)

Output of nonelectrical machinery, which had shown only a modest decline from the October 1966 peak to the June 1967 trough, averaged a little higher for the year. Production of electrical equipment, which had experienced a much sharper drop during the same period, averaged somewhat lower.

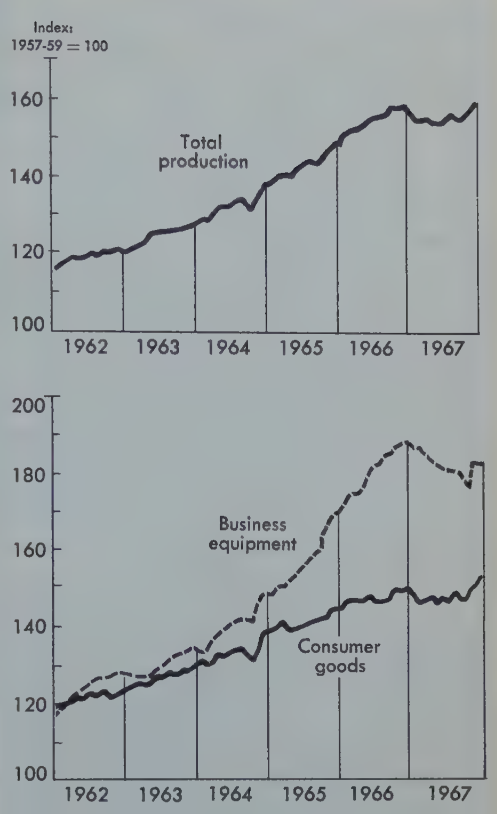
Assemblies of motor vehicles, which had increased each year from 1961 through 1965 and declined in 1966, dropped further in 1967. In the first half of the year, production was cut back because of falling retail sales of new cars. Shortly after production of the 1968 models began, a prolonged strike in the Ford plants sharply reduced output. For all of 1967, assemblies of passenger cars and trucks totaled 9 million units, down 13% from the 10.3 million produced in 1966 and nearly 20% from the 11.1 million turned out in the record year of 1965. (See also AUTOMOBILES.)

The aircraft and parts industry was the only major manufacturing group to show a steady uptrend in output during 1967. Strength in this industry stemmed from the continuing military buildup and from further sizable orders for private and commercial planes. The increase in output over the year amounted to 10%, the largest gain by far among manufacturing industries. Despite the higher rate of output, backlogs continued to rise. (See also AEROSPACE INDUSTRY.)

Producers of railroad equipment maintained shipments of freight cars close to the 1966 level, but this was done at the expense of their order backlogs. The inflow of new orders was sharply below the 1966 rate, even though the investment tax credit was restored in late spring of 1967. Capital expenditures by railroads in 1967 were about one fifth below the 1966 total. (See also RAILROADS.)

Nondurable Manufactures. Production in the typically more stable nondurable goods industries declined less than half as much as the durable goods sector in the first half of 1967. The subsequent rebound was rapid, with output in August and September back to the December 1966 high.

U. S. INDUSTRIAL PRODUCTION



Source: *Federal Reserve Bulletin*, January 1968

All major industries shared in the recovery. Despite the lower production rates in the first half of 1967, seven of the ten major nondurable manufacturing divisions—paper, printing and publishing, chemicals, petroleum products, rubber and plastics, food and beverages, and tobacco products—equaled or exceeded the 1966 volume. Growth trends in these less cyclical product groups have generally been affected only mildly by postwar recessions.

Output of the more cyclical lines of nondurables—textiles, apparel, and leather and footwear—averaged roughly 3% lower in 1967 for the group as a whole. These markets were noticeably affected by imbalances between inventories and sales in the early months of 1967.

Minerals. Largely because of higher coal and crude oil output, production of minerals increased in 1967. Bituminous coal output increased from 534 million tons in 1966 to about 545 million tons in 1967, the highest volume since 1948. Much of the increased output of coal went into inventories, since domestic consumption and U. S. exports of coal held about even with the 1966 production. Crude oil production increased in the United States as a result of lower imports from the Middle East during the war crisis. (See also MINING.)

Utilities. The output of electric power continued to grow, with a rise of 6% in 1967. This increase was well below the 1960–66 average and the 8.5% gain from 1965 to 1966, when demand for electric power for air conditioning was stimulated by the abnormally hot summer months of 1966.

(See also ECONOMIC REVIEW.)

FRANCIS L. HIRT
Office of Business Economics
U. S. Department of Commerce

INSURANCE

Urban rioting, several multimillion-dollar fires, and a record number of traffic accidents harassed U. S. property and liability insurers in 1967. Both the life insurance and the health insurance industries achieved continued growth during the year.

PROPERTY AND LIABILITY INSURANCE

Underwriting profit-and-loss statements for capital stock property and liability insurance companies edged into the black by a fraction of a percentage point in the first half of 1967. Premiums written increased to about $8.3 billion, 10% over the volume for the same period in 1966. Aggregate loss and expense ratios totaled 99.9%, compared with 98.8% a year earlier.

Fires and Catastrophes. Unusually heavy fire damage contributed to the higher loss ratio. The January-to-June fire loss in 1967 amounted to $914,532,000—22% over the 1966 figure. Destruction of Chicago's McCormick Place, the nation's largest convention center, resulted in an insured loss of $22.5 million, not including the value of the exhibits. Another fire, in Rossville, Ga., inflicted estimated insured damages of $15 million to textile plants.

Twenty-three other catastrophes caused estimated insured damages of almost $150 million. One storm alone hit Iowa, Illinois, Indiana, and Michigan in April at a cost of $40 million.

Urban Riots. The spread of racial disturbances during the summer was a major concern to insurers. Violence broke out in nearly 100 cities, resulting in estimated insured losses of nearly $100 million. Present riot coverages and rates, insurance executives agree, are clearly inadequate to bear the economic cost of social upheavals of such proportions.

Automobile Accidents. Automobile insurance lines continued to produce discouraging results as traffic accidents reached a new high of 15,896,000 in 1966. Government and industry interest in the fundamental concepts of the liability system indicates that this aspect of insurance may be the industry's chief problem for years to come.

T. Lawrence Jones
President, American Insurance Association

LIFE INSURANCE

The average American family had $19,100 in life insurance coverage at the end of 1967. About 94%—or $1.08 billion—of the life insurance owned in the United States is with the legal reserve life insurance companies. Policyholders also had over $60 billion in life insurance with the Veterans Administration, fraternal societies, assessment associations, and banks.

New Purchases. Purchases of new life insurance amounted to about $134 billion in 1967. About $97 billion of this sum represented individually bought, ordinary insurance. New purchases of group life insurance, for the most part issued through employers and unions, totaled $30 billion.

Benefit Payments. In 1967 life insurance companies paid a record sum of over $13 billion in benefits to policyholders and in death payments to their beneficiaries in the United States. About 58% of the payments went to policyholders themselves, and the rest went to beneficiaries. About $5 billion was paid under health insurance policies held with the companies.

Investments. The total assets of the more than 1,700 legal reserve life insurance companies reached $177 billion in 1967. These guarantees of future obligations to policyholders and beneficiaries have been a chief source of investment capital. Corporate securities accounted for about $76 billion of the life companies' 1967 holdings and about $27 billion of acquisitions; mortgages accounted for $68 billion of holdings and $8 billion of acquisitions. The net earning rate on life insurance company investments before federal taxes was 4.85%.

Canada. Canada has the world's highest ratio of life insurance ownership to national income. At the beginning of 1967, Canadian families owned nearly $82 billion worth of life insurance. Benefits and annuity payments totaled $981 million, with 66% of the total representing payments to policyholders.

Blake T. Newton, Jr.
President, Institute of Life Insurance

HEALTH INSURANCE

At the beginning of 1967, more than 158 million persons in the United States, or 81% of the civilian population, were protected by hospital expense insurance or had indemnity benefits payable while hospitalized. This coverage was provided by insurance companies, Blue Cross-Blue Shield organizations and medical society-approved plans, and independent plans. The total represented an increase of some 5 million in a year. Of those with hospitalization insurance, 92% also had surgical expense insurance and 74% had regular medical (nonsurgical) protection.

Between 1956 and 1966, the number of persons protected by hospital-expense plans increased by 44 million, and the number of persons covered by surgical insurance increased from 98 million to nearly 145 million. In addition, the number of persons covered by regular medical protection increased from about 64 million to over 116 million.

Policies. More than 1,000 insurance companies issue health insurance policies in the United States. At the end of 1966, these policies protected over 97 million persons for hospital expenses, over 90 million for surgical expenses, and 61 million for regular medical expenses.

Insurance companies also provided major medical expense insurance to 57 million persons, compared with 9 million in 1956. This insurance provides benefits usually up to $10,000 or more to help pay for medical care, both in and out of hospitals, prescribed by a physician.

Benefits. Health insurance benefits totaling $10.2 billion were paid out by all types of insuring organizations in 1966, compared with $9.6 billion in 1965.

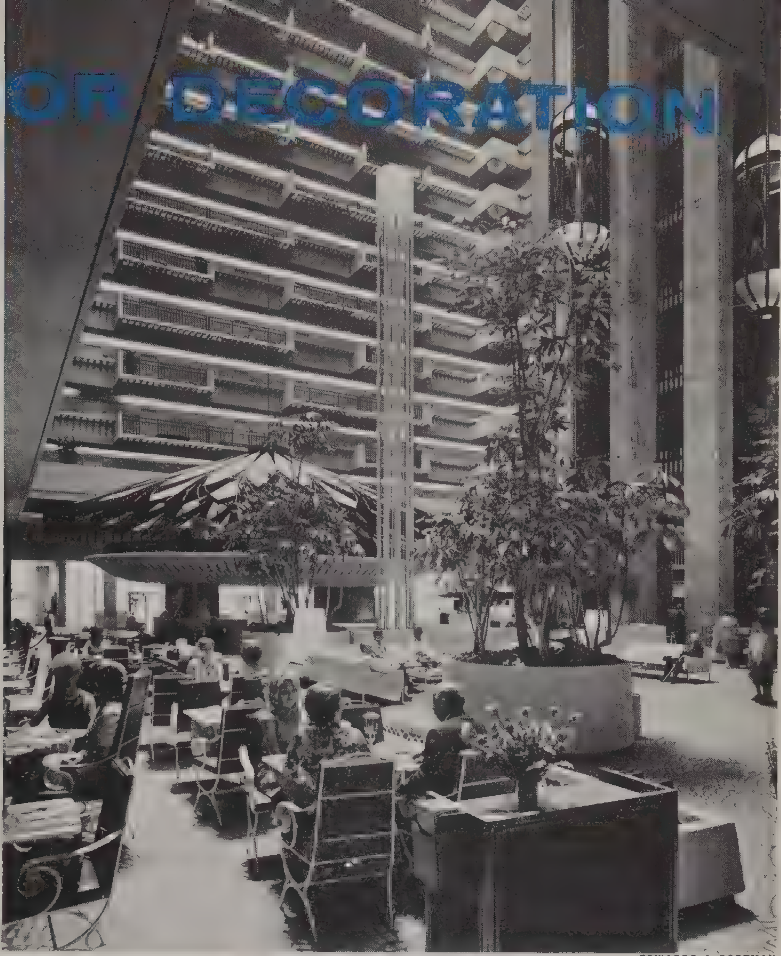
Loss-of-Income Policies. Coverage under loss-of-income insurance provides benefits that help replace income lost because of disability. In 1966, 41 million persons were protected in this way by insurance companies.

Of the total employed U. S. civilian labor force in 1966, an estimated three fourths (54 million persons) were protected by loss-of-income policies or by other formal salary-continuation plans. Insurance companies paid over $1 billion in loss-of-income benefits during the year.

James R. Williams
Vice President and General Manager
Health Insurance Institute

INTER-AMERICAN AFFAIRS. See Latin America.

INTERIOR DECORATION



NEW HOTEL, the Regency Hyatt House in Atlanta, has a 21-story lobby with dining facilities, elevated cocktail lounge, and a 70-foot fountain.

EDWARDS & PORTMAN

INTERIOR DECORATION

The most exciting, stimulating, and colorful happening of 1967 in the general field of design was Expo 67 in Montreal. The exposition excelled architecturally, and its theme, "Man and His World," was beautifully planned and coordinated.

With the exception of Habitat, a model apartment house of the future, however, there was little exhibited specifically in interior decoration at the fair. The Scandinavian Pavilion showed a few items of furniture, and Japan demonstrated with a model room how that country combines and assembles furnishings from other countries with those of its own.

Hotels and Restaurants. One of the most overwhelming architectural achievements of the year was the Regency Hyatt House in Atlanta, Ga., an 860-room hotel designed by Edwards & Portman, and with public spaces by Roland Jutras. The hotel's most striking feature is an indoor courtyard, or atrium, that rises through the building's full 21 stories. Contributing to the feeling of fantasy that this space gives are exterior elevators (running on tracks on one wall of the atrium), a 70-foot fountain, and a parasol-shaped cocktail lounge suspended above the floor by a cable attached to the roof of the atrium. On the roof of the hotel, a domed restaurant revolves 360° each hour to provide patrons a panoramic view of Atlanta.

Another unusual restaurant, Anthony's Fish Grotto, was opened in San Diego, Calif. It is a covered wharf built out over the bay, where diners are made pleasantly aware of the surrounding waters. Most of the furnishings, as well as the accessories, were designed by the interior decorator Gerald Jerome of Furniture Forum. The architects were Liebhardt & Watson.

The most important hotel to be built in Canada in recent years—and the most luxurious—is Canadian Pacific Hotels' Le Château Champlain in Montreal. Interior decorator David T. Williams and associate interior decorator Earle A. Morrison spent two years planning, designing, and supervising the installation of the interiors, which are in five different color schemes and feature works of art by Canadian artists. The 38-story structure has two floors of executive suites in addition to 600 guest rooms.

The first hotel to be opened in Paris in 30 years was the Paris Hilton, an 11-story, glass-fronted cube with 493 guest rooms. Architect Pierre Dufan designed the hotel in modern style; the interiors, also in modern style, were by Raymond Loewy-William Snaith, under the direction of William Raiser.

The 743-suite Century Plaza Hotel, part of a multimillion-dollar urban development in West Los Angeles, Calif., was the largest hotel erected during the year. Minoru Yamasaki was the architect, and Donald A. Robbins was the senior interior designer. Still under construction at the development are five office buildings, four apartment houses, and a 15-acre shopping center with underground parking.

Public Buildings. Interior decoration was represented in the field of education by Lawson Hall, built by Southern Illinois University at Carbondale, Ill., which exemplified the unique properties essential to an audiovisual facility. Its four triangular

DAVID T. WILLIAMS, INC., A.I.D.—EARLE A. MORRISON

COCKTAIL LOUNGE in the penthouse of Le Château Champlain has a central fireplace, the hood of which is enameled copper.

DAVID T. WILLIAMS, INC., A.I.D.—EARLE A. MORRISON

LE CHÂTEAU CHAMPLAIN, Montreal's new luxury hotel, has an Aubusson tapestry behind the grand staircase.

auditoriums form a semicircle on one side of the classroom core; on the other side are hexagonal classrooms, with a total capacity of 1,644 students. A continuous lobby surrounds the auditoriums with outside entrances opening directly to the classrooms. The interior decorator-architect was Mittelbusher & Tourtelot.

Of the new buildings completed in Washington, D. C., the headquarters of the International Monetary Fund is notable for interiors in the modern style, both colorful and supremely comfortable. The exterior of the 13-story structure is characterized by strong vertical pylons to shield windows from the sun. Interior decorators were Don D. McAfee Associates.

A handsome entertainment wing, combining the elegance of the 18th century with the efficiency of the 20th, was added to Gracie Mansion, official residence of the mayor of New York. The two-story structure, added to the existing 18th century house, was designed by architect Mott B. Schmidt.

New Store. Bonwit Teller's new branch store in Westchester County, N. Y., comprising 50,000 square feet of space, was completed in 1967. The building was designed on one level in the contemporary style, with interior areas radiating from a 7,900-square-foot center and featuring marble floors, crystal chandeliers, and murals. The decorator was Harry L. Hinson III, Bonwit's director of store planning.

Private Club. The Lancers Club, atop the Ling-Temco-Vought Tower Building, in Dallas, Texas, had interiors developed in 17th century English decor by John Astin Perkins. The spacious rooms had strong designs which made use of beamed ceilings, wood paneling, and Jacobean furniture.

Vacation Home. A new concept in vacation houses—movable, self-contained, and fully insulated—was offered by the Outboard Marine Corporation, in cooperation with the Aluminum Company of America. The little pavilion house, called "Hide-out," was designed by Andrew T. Costanecki, recipient of the Alcoa Industrial Design Award "for notable achievement" in the imaginative use of aluminum.

Special Train. A three-car train, complete with dining-lounge car, modern kitchen, bar, and sleeping quarters, was designed by Margaret Campbell of Allied Design Associates for Permacel, a division of Johnson & Johnson. It is to be used for training the company's salesmen. The special train was remodeled from obsolete railroad cars.

Conferences. The fourth annual conference of the National Society of Interior Designers was held June 10–15 in Venice, Italy, on the island of San Giorgio Maggiore. The 36th annual conference of the American Institute of Interior Designers was held September 8–14 in Washington, D. C. A new graphics symbol to represent the interior decoration profession was introduced at the meeting.

A significant opportunity for interior designers to update their lighting knowledge was provided by General Electric, sponsor of an interior decorators' conference on lighting. The conference, held in Cleveland, was attended by interior decorators from all parts of the country.

LEE CANNON
Managing Editor, "Interior Design" Magazine

INTERNATIONAL COURT OF JUSTICE. See INTERNATIONAL LAW; UNITED NATIONS.

UPI

THE NEW YORK STOCK EXCHANGE (*above*) was a beehive of activity in the first trading session following the devaluation of the British pound, while the Stock Exchange in London (*right*), normally bustling, remained closed.

INTERNATIONAL FINANCE

The world economy paused in 1967. After extraordinarily rapid growth in production and trade in the previous six years, several major countries—including Britain, West Germany, and to a lesser extent the United States—experienced a slowdown in growth. This in turn reduced the growth in world trade and induced a fall in the prices of some primary products. By year-end, however, economic activity had resumed its rapid increase in most countries. Britain was an exception to this increase, and in mid-November the British authorities devalued the pound sterling in an effort to improve the balance of payments and permit a resumption of economic growth.

The event of the year of potentially the most enduring importance was the agreement among financial officials at Rio de Janeiro on September 29 to plan for creating "special drawing rights" for all members of the International Monetary Fund (IMF). While countries were taking this major step forward, however, they were reducing their financial assistance to the poor countries of the world despite the increasing need for such assistance.

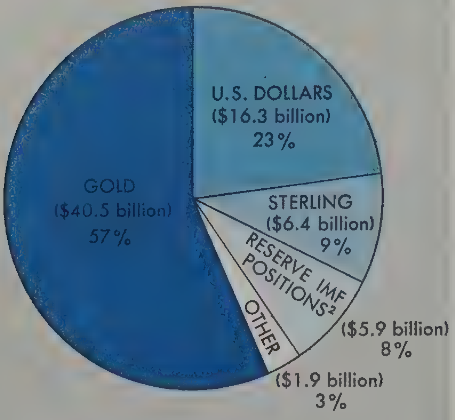
Britain's Devaluation. On November 18, Britain devalued the pound by 14.3%, from $2.80 to $2.40. Twenty-two other countries—mostly members of the sterling area and also Denmark, Israel, and Spain—devalued their currencies by the end of the month. The pound had last been devalued in 1949, when most other currencies of the world were also devalued against the dollar. The devaluation followed nearly five years of payments deficit. Although the balance of payments had improved substantially since 1964, that improvement was purchased by a marked slowdown in Britain's economic growth and, in 1967, by a sharp rise in unemployment.

The devaluation in Britain was precipitated by a speculative run on sterling, but that in turn was related to poor trade performance and to the view that expansionary measures would have to be taken soon. In the week following the devaluation there was sharp speculation on a rise in the price of gold. Seven central banks cooperated to stabilize the gold price in London, the largest private market, by selling nearly $1 billion worth. These countries also provided financial support to Britain to persuade the public that the new exchange rate would be held. The devaluation can be expected to improve Britain's trade position and to permit a reduction of unemployment and a resumption of growth on the basis of strong export demand.

Agreement on International Liquidity. After four years of discussion and negotiation, the "Group of Ten" (comprising Belgium, Britain, Canada, France, Italy, Japan, the Netherlands, Sweden, the United States, and West Germany) in the summer of 1967 agreed on a plan for the creation of a new form of international liquidity, called "special drawing rights," at the IMF. This plan was approved by the 106 members of the IMF at its annual meeting of governors in September, and the proposal was to be ready by the spring of 1968 for submission to parliaments for ratification.

The basic features of the plan call for the creation of special drawing rights (SDR's) for each member of the IMF. The total amount of such drawing rights is to be determined for a 5-year period on the basis of an assessment of the need for long-run growth in international liquidity; and the distribution among countries is to take place on the basis of current IMF quotas or a related formula. No new subscriptions would be required by participating countries. The SDR's would be available to settle imbalances in international payments among countries, just as gold is used today. Countries having balance-of-payments surpluses would agree to accept SDR's in exchange for their own currencies up to a stipulated limit. Like gold in many countries, SDR's would be used only by governments and central banks, not by the public.

COMPOSITION OF WORLD MONETARY RESERVES[1]
(In billions of dollars, June 30, 1967)



[1] Excluding international financial institutions and also the USSR, eastern European countries, and Communist China.

[2] Amounts that can be drawn virtually automatically from the International Monetary Fund, corresponding to members' gold subscriptions, amounts of their currencies sold by the IMF to other members, and outstanding lendings by the IMF.

Data from International Monetary Fund.

The significance of this agreement arises from the fact that international transactions have been growing much more rapidly than acceptable means of international settlement. New supplies of gold, originating largely in South Africa and the Soviet Union, have been inadequate to meet growing private demand for industrial use, jewelry, and hoarding, and at the same time to provide adequate growth in central bank reserves. In fact, in 1966 and 1967 official gold reserves actually diminished, because central banks had to supply private markets with gold to prevent the price from rising much above $35 an ounce.

U. S. dollars have filled the gap between a growing demand for reserves and the inadequate supply of gold, but the short-term lending to the United States that this implies has become unacceptable to a number of other countries. In addition, continued reliance on the dollar carries dangers for the stability of the international payments system, since U. S. short-term liabilities would have to exceed U. S. gold reserves by ever-increasing amounts.

Once they become firmly established and widely accepted as a form of international reserves, SDR's can supplement gold and the dollar and, by mutual agreement, can be increased sufficiently to meet growing demands for reserves. The decision of 1967 thus may be a prelude to creating a new kind of international money, a "paper gold" analogous to Federal Reserve credit in the U. S. economy, and to converting the IMF into a true international central bank for central banks.

Not all countries are agreed on the urgency with which the SDR plan should be activated. France, with the support of several other European countries, has argued that SDR's are unnecessary now. It may thus be a number of years before the new arrangement is finally agreed to on all details and put into operation.

The IMF and World Bank. In the meantime, the IMF carried on with its normal activities, lending over $500 million in 16 currencies to member countries in balance-of-payments difficulty in 1967.

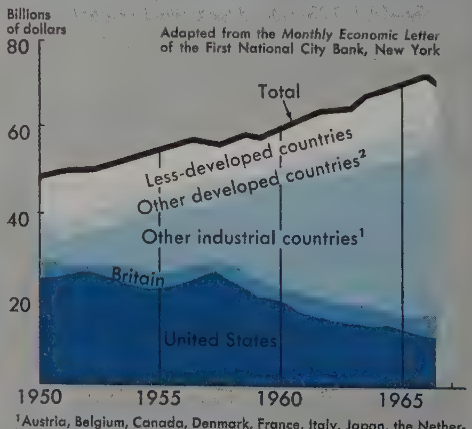
New loans by the World Bank, which engages in long-term development lending rather than short-term balance-of-payments support, were also at a high level. But new loan commitments of the International Development Association (IDA), an affiliate of the World Bank that lends on easier credit terms to countries with repayment difficulties, came to a standstill because donor countries could not agree on the amounts or conditions to be attached to new subscriptions to IDA. The United States, in particular, favored a substantial increase in IDA lending but wanted to impose conditions to mitigate the impact of new IDA lending on the U. S. balance of payments.

Other forms of development assistance were in short supply. The U. S. Congress reduced economic aid funds for countries other than Vietnam in 1966 and again in 1967, and foreign aid was not popular in other major countries either. The slowdown in economic assistance was to be one of the topics to be taken up at the second United Nations Trade and Development Conference in New Delhi in 1968. The less developed countries used the first UNCTAD, in 1964, to air their grievances with respect to the trade and aid policies of developed countries, and to proffer their own solutions.

Interest Rates and Securities Markets. In 1966 interest rates reached 20-year highs in many industrial countries, and the stringent credit conditions threw several securities markets into confusion. In February 1967 finance ministers from Britain, France, West Germany, and the United States held a dramatic meeting at Chequers, England, to agree on a cooperative reduction in interest rates. As economic activity slackened, interest rates in the industrial countries fell markedly until mid-1967 (the 3-month U. S. Treasury bill rate fell from 5.4% in October 1966 to 3.5% in June 1967, for instance), but later in the year interest rates turned upward again. Securities markets in Europe, although still tight, returned to a more normal condition.

The international bond market continued to grow at a remarkable rate, and total new issues approached $2 billion in 1967. This market, consisting of bond issues in "foreign" currencies, had been negligible before 1963. The imposition of the interest equalization tax on new foreign bond issues

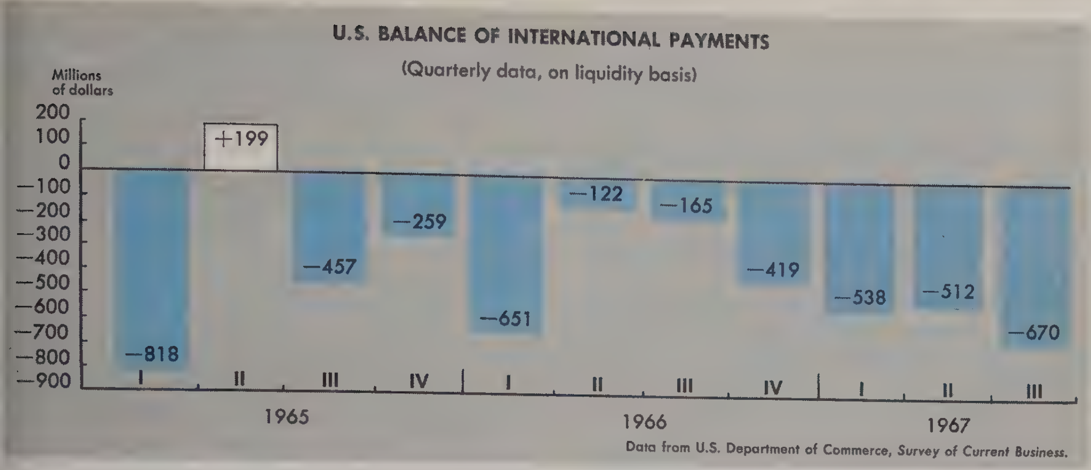
MONETARY RESERVES OF CENTRAL BANKS
(End of year, except data for 1967, which are for June)



Adapted from the *Monthly Economic Letter* of the First National City Bank, New York

[1] Austria, Belgium, Canada, Denmark, France, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, West Germany.

[2] Other European countries, as well as Australia, New Zealand, and South Africa.



U.S. BALANCE OF INTERNATIONAL PAYMENTS

(Quarterly data, on liquidity basis)

Data from U.S. Department of Commerce, Survey of Current Business.

in the U. S. market induced many foreign borrowers to turn elsewhere, and consortia of European banks and underwriters agreed to place the bonds in Europe. Most of the bonds—90% in 1967—were denominated in U. S. dollars.

U. S. Balance of Payments. The U. S. payments position in 1967 worsened sharply as compared with 1966. Again the war in Vietnam was a major source of the outflow, with annual military expenditures in the Far East running $1.3 billion above the levels prevailing in 1963–64. Imports remained high but stable, in marked contrast to the dramatic increase in 1966, but export growth was blunted by the economic slowdown in Europe. A drastic new program to curb outflows and to discourage foreign travel was announced in early 1968.

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PAR VALUE OF CURRENCIES OF MEMBER COUNTRIES OF THE INTERNATIONAL MONETARY FUND

Member	Currency unit	U.S. cents per unit Nov. 21, 1967
Afghanistan[1]	afghani	2.22222
Algeria	dinar	...[3]
Argentina[2]	peso	...
Australia	dollar	112.0
Austria	schilling	3.84615
Belgium	franc	2.0
Bolivia[2]	peso Boliviano	...
Brazil[2]	new cruzeiro	...
Burma	kyat	21.0
Burundi	franc	1.14286
Cameroon	CFA[4] franc	...[3]
Canada	dollar	92.5
Central African Republic	CFA[4] franc	...[3]
Ceylon	rupee	16.8
Chad	CFA[4] franc	...[3]
Chile [2]	escudo	...
China (Nationalist)	yuan	...[3]
Colombia[2]	peso	...
Congo (Brazzaville)	CFA[4] franc	...[3]
Congo, Democratic Republic of	zaire	...[3]
Costa Rica	colón	15.0943
Cyprus	pound	240.0
Dahomey	CFA[4] franc	...[3]
Denmark	krone	13.3333
Dominican Republic	peso	100.0
Ecuador[1]	sucre	5.55556
El Salvador	colón	40.0
Ethiopia	dollar	40.0
Finland	markka	23.8097
France	franc	20.255
Gabon	CFA[4] franc	...[3]
Gambia	pound	...[3]
Germany, West	Deutsche mark	25.0
Ghana	new cedi	98.0
Greece	drachma	3.33333
Guatemala	quetzal	100.0
Guinea	franc	...[3]
Guyana	dollar	50.0
Haiti	gourde	20.0
Honduras	lempira	50.0
Iceland	krona	2.32558
India	rupee	13.3333
Indonesia	rupiah	...[3]
Iran	rial	1.32013
Iraq	dinar	280.00
Ireland	pound	240.00
Israel	pound	28.5714
Italy	lira	0.16
Ivory Coast	CFA[4] franc	...[3]
Jamaica	pound	240.00
Japan	yen	0.277778
Jordan	dinar	280.00
Kenya	shilling	14.0
Korea, South	won	...[3]
Kuwait	dinar	280.00
Laos	kip	...[3]
Lebanon[2]	pound	45.6313
Liberia	dollar	100.0
Libya	pound	280.0
Luxembourg	franc	2.0
Malagasy Republic	franc	...[3]
Malawi	pound	240.0
Mali	franc	...[3]
Mauritania	CFA[4] franc	...[3]
Mexico	peso	8.0
Morocco	dirham	19.7609
Nepal	rupee	...[3]
Netherlands	guilder	27.6243
New Zealand	dollar	112.0
Nicaragua	córdoba	14.2857
Niger	CFA[4] franc	...[3]
Nigeria	pound	280.0
Norway	krone	14.0
Pakistan[1]	rupee	21.0
Panama	balboa	100.0
Paraguay[2]	guaraní	...
Peru[2]	sol	...
Philippines	peso	25.641
Portugal	escudo	3,47826
Rwanda	franc	1.00
Saudi Arabia	riyal	22.2222
Senegal	CFA[4] franc	...[3]
Sierra Leone	leone	140.0
Singapore	dollar	32.6667
Somalia	Somali shilling	14.0
South Africa	rand	140.0
Spain	peseta	1,42857
Sudan	pound	287.156
Sweden	krona	19.3304
Syrian Arab Republic[2]	pound	45.6313
Tanzania	shilling	14.0
Thailand	baht	4,80769
Togo	CFA[4] franc	...[3]
Trinidad and Tobago	TT dollar	58.3333
Tunisia	dinar	190.476
Turkey	lira	11.1111
Uganda	shilling	14.0
United Arab Republic[2]	pound	287.156
United Kingdom	pound	240.0
United States	dollar	100.0
Upper Volta	CFA[4] franc	...[3]
Uruguay[2]	peso	13.5135
Venezuela[2]	bolívar	...
Vietnam, South	piastre	...[3]
Yugoslavia	dinar	8.0
Zambia	pound	280.0

[1] Not all transactions in the exchange market take place at rates governed by the par value. [2] No transactions in the exchange market take place at rates governed by the par value last agreed with the IMF. [3] Par value not yet established. [4] African Financial Community (Communauté Financière Africaine).

INTERNATIONAL LAW

The United Nations again served in 1967 as the chief vehicle through which most major developments in international law were planned or took place. These developments included the adoption by the UN International Law Commission of draft articles on the law of special missions. The articles will serve as the basis for an international convention defining the status, privileges, and immunities of special missions sent by one state to another.

The General Assembly adopted declarations of legal principles concerning territorial asylum and the elimination of discrimination against women. Eighteen states were elected members of a new UN Commission on International Trade Law, established to promote the progressive harmonization and unification of the law of international trade.

Among the many significant events of the year, those of greatest import for the future of international law concerned UN peacekeeping, space law, and disarmament and arms control.

UN Peace-Keeping. On May 18, 1967, in response to a request from the host country, the United Arab Republic, UN Secretary General U Thant ordered the UN Emergency Force (UNEF) to withdraw from the UAR-Israel border. The withdrawal of UNEF focused attention on the serious inadequacies of present concepts of UN peacekeeping.

UNEF's initial mandate, defined by the General Assembly in 1956, was to "secure and supervise the cessation of hostilities" between the UAR and Israel. The force was admitted into the UAR with no clear agreement as to when or under what conditions it would be withdrawn, other than an expression on both sides of a "willingness to maintain UNEF until its task is completed." In these circumstances, the central legal question presented by a request for withdrawal is whether the "task" of the force had been completed. This question raises subsidiary questions as to who should make this judgment on the part of the United Nations and how the parties should resolve a difference in opinion concerning the underlying question.

The secretary general's response to the UAR request, however, assumes that the only relevant factor is the UAR decision to revoke its consent to the presence of UNEF. The result is to place the continued existence of "consent" forces, as distinguished from enforcement forces, under the control of the host state. In the view of the secretary general, a "consent" force is voluntary in all aspects.

This view may accurately reflect the realities of the Middle East conflict, but its expression as a constitutional principle of UN peacekeeping action was seen by many as a backward step. The establishment of UNEF represented a major advance in providing the United Nations with a practical means of dealing with dangerous situations in which no Security Council enforcement action could be had. The consent of the UAR was required for the stationing of the force, but the United Nations defined its duties and might have been thought to have voice in defining its duration. (See also MIDDLE EAST.)

Space Law. On Jan. 20, 1967, the Treaty of Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, was opened for signature at London, Moscow, and Washington. The treaty was quickly signed and ratified by nearly every major state including the United States and the USSR, and it entered into force on Oct. 10, 1967.

The basic principles established by the treaty are that international law and the UN Charter apply in outer space; that the "exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries"; and that "outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means."

The treaty also establishes the first major arms control provision to be accepted by the leading powers since the 1963 nuclear test ban treaty. In the space treaty, the parties "undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner." The parties also agree to open to inspection by representatives of the other parties all "stations, installations, equipment, and space vehicles on the moon and other celestial bodies."

Disarmament and Arms Control. On Aug. 24, 1967, the United States and the Soviet Union submitted separate but identical texts of a Draft Treaty on the Non-Proliferation of Nuclear Weapons to the Geneva Conference of the 18-nation disarmament committee. The draft submitted was a complete treaty text except that the inspection provision was left blank because the United States and the Soviet Union had been unable by then to reach a formula that would be acceptable to all states whose support would be necessary to make the treaty a reality.

Under Article I of the U. S.-Soviet draft, states possessing nuclear weapons would undertake "not to transfer . . . nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices" to any recipient whatsoever. The article would also obligate the nuclear powers not to assist, encourage, or induce "any non-nuclear-weapon States" in acquiring nuclear weapons.

Article II would place a parallel obligation on the non-nuclear-weapon states "not to receive the transfer . . . of nuclear weapons or other nuclear explosive devices." The article would also obligate the non-nuclear-weapon states "not to manufacture or otherwise acquire nuclear weapons."

The U. S.-Soviet draft is the result of years of negotiation on the intractable problem of halting the spread of nuclear weapons. Many of the non-nuclear states are in agreement with the goal of nonproliferation but have raised basic questions concerning (1) their future security without nuclear weapons, (2) the impact of the treaty limitations and inspection procedures on their development of peaceful uses for nuclear energy, and (3) the degree to which they can be assured of sharing in the progress that the nuclear-weapon countries may make in peaceful use technology. The need to answer these questions has served to delay conclusion of the treaty, but it may also produce an increased willingness among the nuclear-weapon states to consider far-reaching changes in international security systems. (See also UNITED NATIONS.)

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INTERNATIONAL RELATIONS. See AFRICA; ASIA; EUROPE; FOREIGN POLICY; LATIN AMERICA; MIDDLE EAST; UNITED NATIONS.

INTERNATIONAL TRADE

The strong growth of world trade in recent years was interrupted in 1967 by a general slowdown in the expansion of the world economy. Devaluation of the pound sterling and other currencies occurred too late in 1967 to exert any major effect on the year's total trade.

The major development in international trade in 1967 was the successful conclusion of the Kennedy Round of the General Agreement on Tariffs and Trade (GATT) in Geneva, Switzerland. It is estimated that the tariff concessions negotiated in the Kennedy Round affect about $40 billion worth of trade in the non-Communist world. Import duties on a wide range of industrial products were cut in half by the major countries. (For details on the Kennedy Round, see below, *Tariffs.*)

TRADE DEVELOPMENTS

Following several years of fast growth, exports by non-Communist countries expanded slowly in 1967. Based on returns for the first nine months, exports were expected to reach a total of about $190 billion for the year. The 5% rate of gain over 1966 was less than half the average rate of the three preceding years.

A general economic slowdown in many of the largest trading countries was the main reason for this relatively sluggish increase in trade. In the United States and most countries of western Europe the level of industrial production in 1967 was no higher than in the previous year, and the expansion in the gross national product moderated considerably.

Devaluation. Devaluation of currencies by more than a score of countries tended to affect the value of world trade adversely in the final weeks of the year. Britain, the third largest non-Communist trading nation, devalued the pound sterling by 14.3% on November 18. Sizeable trading areas that followed Britain in devaluation—although in some cases the cuts were smaller—included Denmark, Hong Kong, Spain, and New Zealand.

In the long run the exports of the countries that devalued may be expected to expand because prices will be lower. However, uncertainties about the par value of the currencies—especially of the pound, one of the world's two reserve currencies—probably had a negative effect on trade in the period immediately preceding and following devaluation.

TRADE IN NON-COMMUNIST WORLD, BY REGIONS, 1966–67
(Billions of dollars; quarterly figures expressed in annual rates)

Area	1966				1967	
	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter	2d quarter
Total exports, f.o.b.	173.0	182.1	176.9	193.9	185.8	193.0
U.S. and Canada	37.7	41.3	39.7	43.0	41.8	43.3
Latin America	12.8	13.1	12.8	12.5	12.6	13.2
Western Europe	82.6	86.3	83.6	95.0	89.2	93.2
Africa[1]	9.3	9.4	9.2	9.8	9.9	9.9
Asia[1]	26.1	27.2	27.1	29.0	27.4	27.4
Australia, New Zealand	4.2	4.5	4.1	4.1	4.6	4.8
Unclassified	0.3	0.3	0.4	0.5	0.3	0.2
Total imports, c.i.f.	185.9	191.4	189.9	202.2	197.7	204.2
U.S. and Canada	34.7	38.1	38.1	40.5	40.7	40.7
Latin America	11.3	11.9	12.7	13.1	12.0	12.5
Western Europe	97.0	97.8	94.4	101.4	99.4	102.1
Africa[1]	9.7	9.1	9.8	10.6	10.7	10.6
Asia[1]	27.9	29.1	29.3	31.3	30.0	32.5
Australia, New Zealand	4.8	4.5	5.1	4.6	4.9	5.1
Unclassified	0.5	0.9	0.5	0.7	...	0.7

[1] Africa total excludes United Arab Republic (Egypt); Asia total includes UAR. Data may not add due to rounding of figures.

VOLKSWAGEN OF AMERICA, INC.

VOLKSWAGENS are unloaded in Los Angeles from a ship that carries 1,750 automobiles on each trip from Germany.

United States. U. S. exports in 1967 climbed to a new peak of over $31 billion, while imports also broke records to reach about $26.5 billion. Rising sharply in January, exports remained on a high plateau through September. They dropped off in October as demand for U. S. products eased with generally slowing expansion abroad. The U. S. export total in 1967, based on data for the first 10 months, was 5% higher than in 1966. That rate of advance compared with a gain of 10% between 1965 and 1966.

Foreign goods arriving in the United States were at their highest level for the year in January, second only to the all-time peak of September 1966. Imports averaged about $100 million a month lower during the rest of the year. For 1967 as a whole, imports were about 3.5% over 1966, a significantly lower rate than the exceptional 20% expansion from 1965 to 1966.

U. S. Exports. All of the export expansion in 1967 stemmed from increased sales of nonagricultural products. Farm exports fell from their 1966 peak level by about 8%. Sharp declines in wheat and feed grain shipments were mainly responsible for the reduction. Improved crops abroad and a reduction in the crop carry-over in the United States (which limited aid shipments) caused wheat exports to fall in value by about 25% in the first three quarters of the year. Sales of corn (maize) to western Europe dropped notably in the face of stiff competition from South Africa and Argentina.

Nonagricultural exports were about 10% higher than in 1966. Nearly half of that gain stemmed from crude petroleum and aircraft, and automotive shipments to Canada.

Crude petroleum, normally not exported from the United States except in relatively small quantities, added about $100 million to the export sales total. These shipments went mainly to Britain, West Germany, and Canada because their supplies were disrupted as a result of the Israeli-Arab war in June.

U. S. aircraft deliveries to major foreign airlines were stepped up in 1967 with the lessening of pressure on production of engines for the Vietnam conflict. Through September, aircraft sales were one third above the level in the same months of 1966.

The U. S. agreement with Canada by which new automotive equipment and parts move duty-free between the two countries continued to provide a major stimulus to trade. By the end of September, exports of new passenger cars were more than double their 1966 total to that country, while truck shipments were 80% greater. The automotive strikes in the United States were expected to limit shipments to Canada to some extent in the final months of the year.

Increases in U. S. exports in 1967 were almost entirely in sales to developed countries, especially Canada and Japan, where the economies continued to expand with considerable strength. Sales to western Europe, where most countries had no rise in production levels since early 1966, were only 3.5% higher. The developing countries also provided only sluggish markets for U. S. goods, except for East and Southeast Asia, to which shipments of rice, cotton, and steel-mill products were particularly expanded.

Another record volume of new authorizations for loans, guarantees, and insurance on U. S. exports by the Export-Import Bank was achieved in the fiscal year ending June 30, 1967. Loans and special credits totaling $2.5 billion were provided to finance capital equipment and services for buyers in 39 countries. These included jet aircraft and petrochemical, nuclear power, and synthetic rubber plants. Also included in the total was financing for defense articles and services purchased by friendly foreign governments.

Legislation was introduced in the Congress that would extend the life of the Export-Import Bank and substantially increase the amount of loans, guarantees, and insurance permitted.

Two unresolved problems related to the Export-Import Bank's role were widely discussed in the Congress during the year: (1) the financing or guaranteeing of shipments to Communist countries or to countries exporting to North Vietnam, and (2) the export of military equipment to developing countries under sales arranged by the Department of Defense.

U. S. Imports. With a pause in U. S. economic expansion in 1967, demand for imported goods became relatively sluggish. Arrivals of industrial supplies, which make up nearly 50% of total imports, were at a lower level than in 1966. As manufacturers drew on inventories, imports of wool, textile yarns and fabrics, ores, wood pulp, and other products dropped below the value of 1966.

Foreign consumer goods, however, continued in strong demand, especially footwear from Italy and Japan and television sets and other electrical household goods. New automobiles from Canada also were imported in substantially greater quantities. Metalworking machinery, trucks from Canada, and other capital equipment purchases brought the total for such goods to about a fifth higher than in 1966. In that year, however, such purchases had soared by more than two fifths over 1965.

Agricultural imports remained about the same in total value as in 1966. Sharp drops in green coffee imports and in purchases of animals for food were approximately balanced by advances in sugar, meat, cocoa, and vegetable arrivals.

U. S. Balance of Payments. In the first three quarters of 1967, the deficit in the U. S. balance of payments expanded to $2.3 billion at a seasonally adjusted annual rate. This total represented a deterioration of about $1 billion from the level in each of the two preceding years. Had not the merchandise trade balance improved at a rate of over $700 million (on a balance of payments basis), the deficit would have expanded even more.

The major adverse movements in the first nine months of 1967 compared with the same period of 1966 were: (1) a large net outflow of capital through the banks; (2) a decline in net receipts from foreign purchases of certificates of deposit and nonmarketable, nonconvertible government securities; and (3) an absence of nonscheduled repayments on U. S. government credits.

Favorable factors included: (1) an increase in transactions in foreign securities in the United States and (2) larger cash receipts associated with military sales contracts.

Trowbridge Testimony. In the second half of 1967, several members of the U. S. Congress introduced bills that would limit U. S. imports by imposing quotas. In testifying against those bills before the Senate Finance Committee on October 18, Secretary of Commerce Alexander B. Trowbridge stated that they "bring into question the entire direction of the foreign trade policy which this nation has followed for more than 30 years .... Our trading relations with the rest of the world would undergo a serious setback if these proposed measures were approved ... Enactment ... [would] provoke very serious countermoves against our exports." No action was taken by the committee in 1967.

Canada. The foreign trade of Canada continued to advance at a fast rate in 1967. Exports and imports rose through September about 11% each, resulting in an export surplus of about $270 million (in Canadian dollars).

The United States continued to be Canada's major trading partner, accounting for an overwhelming portion of Canada's foreign purchases and providing the largest market for Canadian products. In the first nine months, exports to the United States soared by 17.5% to a total of $5.3 billion (Canadian). At the same time purchases from the United States were up by nearly 14% to $5.9 billion (Canadian).

Trade with Britain, Canada's second largest trading partner, was largely static in 1967. Imports were off slightly from the previous year, and exports rose only marginally, with the result that the normal favorable trade balance with that country rose to $366 million (Canadian). Canada helps to balance its large trade deficit with the United States by trade earnings from Britain and other countries. In 1967, Canada's net earnings from the rest of the world dropped as imports rose faster than exports.

By far the major part of the increase in Canadian exports in 1967 stemmed from greater shipments of automotive equipment. This growth largely resulted from the expanded production facilities developed after the agreement with the United States that automotive products should move duty free between the two countries.

None of Canada's other major commodity exports were particularly expansive. There was little further change in the level of newsprint shipments or wheat sales, following their large rises in 1966. Some gains were registered in exports of copper, aluminum, and wood pulp, but sales of lumber were below the 1966 level.

Canadian imports were also swelled by automotive products. Purchases of foreign machinery, consumer goods of various types, and food registered sizable advances.

The Canadian balance of international payments in the first half of 1967 showed a current account deficit of $555 million (Canadian), a decline of over $200 million from the same period of 1966. A sharp improvement in the balance of trade and a reduced deficit from nonmerchandise transactions accounted for the change. The main reason for the narrowing of the nonmerchandise deficit was substantial earnings from tourism—a result of foreigners' visits to Expo 67 in Montreal. The second quarter of 1967—the beginning of the Expo season—showed a surplus of $120 million (Canadian), rather than the deficit that is normal for a second quarter.

The net inflow of capital into Canada was $29 million (Canadian) lower than in 1966, and did not fully cover the deficit on current account. Thus, official reserves were reduced by $68 million (Canadian) in the first half of 1967.

Latin America. Reflecting lower prices for major commodities and the effects of stagnation in many of their major industrial markets, exports from Latin America ceased to grow in the first half of 1967. Although imports continued on the uptrend, their rate of expansion was considerably below that of the previous year.

With the exception of cocoa, prices of all major export commodities from this area were lower in 1967 than in 1966. Copper, lead, sugar, beef, wool, and coffee all sold at substantially less than a year earlier. The index of Latin American export commodity prices for the first half of the year was 10% below that in the same period of 1966.

This situation helped to point up the need for regional integration. At the Punta del Este meeting of American chiefs of state in April a commitment was made to form a Latin American common market by 1985. Such a market would evolve from the five-nation Central American Common Market (CACM), which has grown dynamically in the last five years, and the 11-nation Latin American Free Trade Association (LAFTA), which has moved more slowly to eliminate tariffs among member countries.

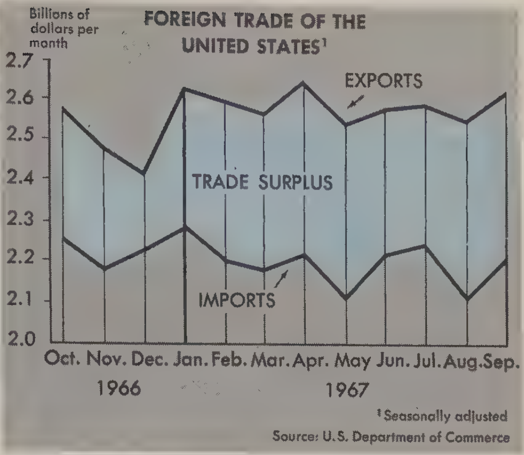
Among the major Latin American countries, Mexico experienced an expanded trade deficit in 1967. Poor cotton and coffee crops helped reduce the level of exports through June, while imports rose in line with industrial growth, which was expected to be 10% higher than in 1966.

The trade of Argentina, in surplus since 1963, continued to be favorable in 1967, although earnings from trade through September were somewhat below those of 1966. Imports, stimulated by liberalization of capital goods purchases, rose marginally.

Brazil appeared on the way to a trade deficit for the first time since 1963 if trends in the first three quarters continued to the end of the year. Rising imports as a result of the government's liberalization policy and declines in exports because of lower commodity prices brought about a slight trade deficit in the January-September period.

(See also LATIN AMERICA.)

Western Europe. The continued stagnation in production and the relatively slow growth in domestic demand in western Europe caused imports to rise by no more than 3.5% in the first nine months to an annual rate of about $100 billion. Export growth held up better, but it also lacked the buoyancy of recent years.


FOREIGN TRADE OF THE UNITED STATES[1]

[1] Seasonally adjusted

Source: U.S. Department of Commerce

The trade of the European Economic Community (EEC), or Common Market, was dominated by the situation in West Germany where the slackening in economic activity led to reduced demand for imports and a more vigorous export drive. Through August, while most countries of the EEC had a trade deficit with the world outside the community, West Germany ran such a large surplus that it overshadowed the others' deficits and caused the EEC as a whole to be in substantial surplus.

Exports from most EEC countries were adversely affected in 1967 not only by the subdued economic trends in major countries but by the closing of the Suez Canal, which limited exports, particularly to Asia. After midyear, the prices of many imports were affected by increased freight costs resulting from the Middle East crisis. Imports were also greater in some countries as stocks of raw materials and semimanufactures began to be rebuilt in anticipation of expanding production and trade.

Trade of the European Free Trade Association countries was strong in the first six months of 1967, especially with other member countries and with the world outside the EEC. Exports to member countries expanded over the first six months of 1966 by an exceptional 14.5%. Imports were only slightly less buoyant.

Because of its great size, the trade of Britain overshadows that of the other EFTA countries. In the first nine months, both British exports and imports were 4% above their 1966 level. Exports moved strongly in the first half. Adversely affected by the Middle East situation, by dock strikes that started in September, and by weakness in overseas markets, exports fell back in the third quarter. Foreign purchases by Britain rose sharply through June as a result of the removal of the import surcharge in November 1966 and a high level of food and fuel purchases. They eased in the third quarter, despite the marked increase in the cost of fuel (because it could not be shipped through the Suez Canal).

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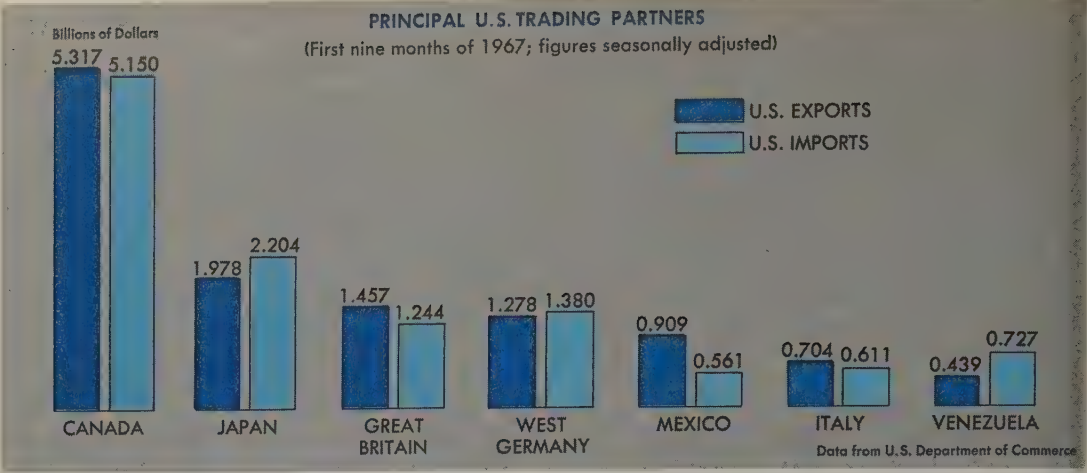
TARIFFS

The extensive trade negotiations that had begun in 1964 under the auspices of the General Agreement on Tariffs and Trade (GATT) were completed in 1967. Further advances were achieved during the year in the development of regional economic groups.


PRINCIPAL U.S. TRADING PARTNERS

(First nine months of 1967; figures seasonally adjusted)

Data from U.S. Department of Commerce

GATT. The sixth round (known as the Kennedy Round) of GATT multilateral trade negotiations—the most comprehensive ever conducted—was concluded in Geneva on June 30, 1967. The General Agreement on Tariffs and Trade, to which a total of 75 countries had adhered by the close of 1967, consists of a code of conduct for international trade and a schedule of tariff concessions by each contracting party to the others. It also provides a framework for negotiations to reduce barriers to trade, and a forum for the discussion of commercial policy.

Approximately 50 countries, accounting for about 80% of world trade, participated at Geneva. Unlike earlier negotiations, the Kennedy Round was conducted on a linear (across-the-board) basis, rather than item by item. It dealt with agricultural as well as industrial products, considered nontariff as well as tariff barriers to trade, and provided special negotiating procedures for the developing countries.

The principal result of the 3-year negotiations was a tariff reduction of 50% by the major participants on most industrial products, and a reduction of 30% to 50% on others. The average reduction in duty on industrial articles was about 35%.

The negotiations on chemical products were particularly complex because of the U. S. system of basing the dutiable value of certain chemicals on their American selling price rather than on their export value, which is the customary basis. The use of what is known as "American selling price" (ASP) resulted in a higher dutiable value than would be obtained by the use of export value. European countries at first refused to negotiate on chemical products unless the use of ASP was eliminated. Inasmuch as it could be eliminated only by the U. S. Congress, however, somewhat limited concessions on chemicals were agreed to in the Kennedy Round. Moreover, through a separate arrangement, more extensive European tariff reductions on chemicals were made contingent on the U. S. abolition of ASP.

In the textile sector, the existing Long-Term Cotton Textile Arrangement was extended to 1970. (This arrangement is designed to prevent market disruption in countries importing cotton textiles, and at the same time facilitates the expansion of cotton textile production in developing countries.) The extension was accompanied by more liberal access to import markets under the arrangement, and by tariff reductions on numerous individual textile articles.

Import duties were reduced on numerous agricultural products, but the reductions were less impressive than those on industrial products. They were accompanied, however, by a world arrangement guaranteeing higher minimum trading prices on grains and establishing a program to supply 4.5 million tons of food annually to developing countries.

U. S. TRADING PARTNERS, 1966–67
(In millions of dollars)

Country	Exports and reexports		Imports	
	1966	Jan.–Sept. 1967	1966	Jan.–Sept. 1967
Total	$30,336	$23,469	$25,550	$19,616
Argentina	244	176	149	104
Australia	661	597	395	289
Belgium-Luxembourg	690	517	567	437
Brazil	579	399	600	410
Canada	6,661	5,317	6,125	5,150
Chile	255	182	229	141
Colombia	287	158	245	184
France	1,007	785	698	502
Germany, West	1,674	1,278	1,797	1,380
Hong Kong	229	186	416	365
India[1]	929	746	327	219
Italy	914	704	743	611
Japan	2,365	1,978	2,964	2,204
Korea, South	339	324	85	85
Mexico	1,180	909	750	561
Netherlands	1,226	881	320	264
Netherlands Antilles	72	57	304	229
Peru	309	210	311	225
Philippines	349	322	398	286
South Africa	401	340	250	170
Spain	518	374	163	154
Sweden	359	269	300	238
Switzerland	415	306	388	275
United Kingdom	1,737	1,457	1,786	1,244
Venezuela	598	439	1,002	727
Other countries	6,338	4,558	4,238	3,162

[1] Exports exclude "special category" shipments on which information is withheld for security reasons.

The most significant accomplishment in the field of nontariff trade barriers was the development of a code on antidumping practices. The code supplemented earlier GATT procedures to be followed in antidumping actions.

Other important accomplishments regarding nontariff barriers were included in the conditional chemical agreement. Contingent upon the U. S. elimination of valuation based on the American selling price, France, Italy, and Belgium agreed to eliminate discriminatory aspects of automobile road-use taxes; Switzerland agreed to modify regulations on canned fruit; and Britain agreed to reduce the margin of preference accorded to Commonwealth countries on unmanufactured tobacco.

A number of concessions, for which reciprocal concessions were not required, were granted by the developed countries on products of particular interest to the developing countries. Although most of the tariff reductions agreed upon in the round were to be phased over a period of years, the concessions to the developing countries were to be implemented, if possible, immediately.

Regional Arrangements. In recent years regional economic arrangements—for example, free-trade associations and customs unions—have been negotiated to reduce or eliminate trade restrictions among member countries and, in some cases, to establish a common external tariff. The increasing recourse to such arrangements continued in 1967 with agreements to create a Latin American common market, a West Indies free-trade area, and an East African common market.

Major regional organizations already in operation were the European Economic Community, the European Free Trade Association, the Latin American Free Trade Association, and the Central American Common Market.

European Economic Community (EEC). The EEC, the first regional economic arrangement, was established by the Treaty of Rome in 1958. The community was initially composed of Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany. After 1961, Greece, Turkey, and a number of other countries (principally former French colonies) became associate members. The full-member countries have a population of approximately 185 million people.

On July 1, 1967, the full members of the EEC reduced by a further 5% the duties on industrial imports originating within the community. This action constituted the ninth in a series of reductions designed to attain free trade in industrial products among the members. The resulting duties were 15% of those existing on Jan. 1, 1957 (the base date). Although the Treaty of Rome did not call for the elimination of duties on intracommunity trade in manufactured goods until 1970, their elimination was expected by July 1, 1968.

During 1967 the community established a common market for fruits and vegetables (January); eggs, pork, and poultry (July); and rice (September). Eggs, pork, poultry, and rice constituted about 35% of the community's agricultural production. The duties on most agricultural products traded among members, however, had not been reduced as much as those on industrial products.

The member states of the EEC made no further attempt in 1967 to align their national tariffs with the EEC's projected common external tariff. Two of three stages toward such alignment had been completed by the close of 1963, reducing (with certain exceptions) the difference between the 1957 rates of the individual members and the rates in the common external tariff by 60%. Common external rates were scheduled to be applied to imports from nonmember countries on July 1, 1968.

In preparation for the customs union planned to be fully effective by July 1, 1968, the community members began to harmonize their customs legislation, unify technical standards, and simplify customs inspections and other formalities between member states. To achieve more complete economic union—the ultimate goal of the Treaty of Rome—EEC would have to attain free movement of workers and capital as well as common policies for transportation, foreign trade, and economic development.

European Free Trade Association (EFTA). EFTA was formed in 1960 by Austria, Denmark, Norway, Portugal, Sweden, Switzerland, and Britain. Finland became an associate member in 1961 and from then on enjoyed the rights of a full member. The EFTA countries encompass approximately 100 million people.

EFTA became the first regional arrangement to establish a free-trade area for industrial goods when, on Dec. 31, 1966 (three years ahead of schedule), it eliminated nearly all the remaining duties on industrial products traded among members. At the same time, Finland made a further reduction of 10% in its duties on manufactured products, thereby reducing such duties to only 10% of their base (1960) level. With the abolition of internal tariffs, members began in 1967 to consider other areas of economic cooperation, such as nontariff trade barriers and rules of fair competition.

Unlike the EEC, EFTA did not seek to establish a common tariff on imports from nonmember countries or to reduce duties on agricultural commodities traded within the association. However, EFTA undertook to stimulate intraregional trade in agricultural products.

On May 11, 1967, in an effort to promote the creation of a single European market, Britain formally applied for membership in the EEC. Denmark, Ireland, Norway, and Sweden likewise submitted applications for membership. Although France had rejected Britain's bid, by the close of 1967 Britain had not withdrawn its application. (See also EUROPE.)

Latin American Free Trade Association (LAFTA). LAFTA was formed in 1961 by nine countries—Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay. With the accession of Venezuela in 1965, LAFTA became the largest regional economic group in the world, with a population of about 190 million.

At their sixth annual conference in late 1966, the LAFTA members agreed on 500 tariff reductions affecting raw materials and agricultural and industrial products. Although the number of concessions was smaller than that agreed upon in the preceding year, tariffs were reduced on many significant items, including petrochemicals, oil-drilling equipment, tools, farm machinery, and home appliances. The members also agreed to establish a supreme organ composed of the foreign ministers of the member nations and approved Bolivia's application for membership.

At two extraordinary sessions in 1967, the members continued negotiations on Venezuela's tariff adjustments on imports from other countries in the group, considered margins of preference, and examined proposals for the second set of additions to the common schedule—a list of products that the members agree to free of virtually all barriers to intra-LAFTA trade by 1973. At the end of the year, products accounting for more than 50% of the value of trade between the members had been placed on the common list.

Members of LAFTA, like those of EFTA, continued in 1967 to apply their individual tariffs to imports from nonmember countries. LAFTA's long-range plans, however, included the eventual establishment of a common external tariff.

Latin American Economic Integration. In 1967, Latin American countries agreed to form a common market by 1985 through the union of the 11-member Latin American Free Trade Association and the 5-member Central American Common Market. Efforts to develop uniform regional policies had been obstructed by currency instability and by wide differences in the economic development of the countries. A coordinating commission consisting of representatives of both associations was appointed in 1967 to initiate studies and to prepare recommendations.

GLENN W. SUTTON
Acting Chairman, U. S. Tariff Commission

IOWA

Most of the significant news in Iowa in 1967 was related to the proceedings of the state's General Assembly, which met in its longest session to date. The regular session convened on January 10 and did not adjourn until June 30.

Legislation. The largest tax increase ever voted by an Iowa General Assembly was signed into law in July. The bill raised state taxes $102 million to a total of $373 million. The sales tax was increased from 2% to 3%, and a 3% tax was imposed on a long list of services, including advertising.

The Iowa legislature gave second approval to five proposed constitutional amendments. The amendments would grant home rule to Iowa cities and towns; provide for annual sessions of the General Assembly; give the governor an item veto on appropriation measures; provide a new legislative apportionment plan on a strict population basis, calling for a Senate of 50 members and a House of Representatives of 100 members; and give the legislature authority to fix salaries, expenses, and allowances for succeeding legislatures. Iowa citizens are to vote on all five amendments in November 1968.

In his budget message, Gov. Harold E. Hughes indicated that his recommendations for expenditures would reduce the state's treasury surplus of approximately $100 million to about $20 million. The budgeted items amounted to more than $400 million.

The legislature approved most of the recommendations but made a major tax increase necessary by increasing state aid to schools. The state's share of support to public elementary and secondary schools was increased by the 1967 legislature's record appropriation from approximately 12% of the typical budget to nearly 36%.

In other notable legislation, the salary of the governor was raised from $25,000 to $30,000 and that of the attorney general from $16,500 to $21,500. Salaries of other members of the state executive council (the secretary of state, state treasurer, secretary of agriculture, and state auditor) were increased from $15,000 to $18,500.

Two major reorganization bills were passed by the General Assembly. One bill replaced the state tax commission with a department of revenue headed by a director of revenues. The other abolished the state board of control and state social welfare commission and replaced them with a single director.

Economy. For 8 of the last 10 years Iowa's corn crop was the largest in the nation; but in 1967, for the second time in that period, it ranked second to that of Illinois. The state's soybean harvest, however, again set a record.

Racial Unrest. Bands of Negro youths roamed the streets of Waterloo, throwing stones and setting fires, on two nights in July. It was the second successive summer that violence had erupted in the city. On July 16 a similar disturbance occurred in Des Moines. In August, Governor Hughes initiated a campaign to increase employment opportunities for Negroes in the state.

Local Government. Voters in Des Moines approved a referendum, permitted by action of the 1967 legislature, to convert the city's council-manager form of government to allow direct election of a mayor by the people. Burlington voters approved a change from commission government to a council-manager system.

Highways. The east-west Interstate Highway 80 was completed across Iowa from its eastern entry at Davenport to its western exit at Council Bluffs.

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University of Iowa

IOWA • Information Highlights

Area: 56,290 square miles (145,791 sq km).

Population: 2,753,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Des Moines, the capital, 216,000; Cedar Rapids, 103,000; Davenport, 94,500; Sioux City, 91,000; Waterloo, 74,000; Dubuque, 59,500.

Government: *Chief Officers*—governor, Harold E. Hughes (Democrat); lt. gov., Robert D. Fulton (D); secy. of state, Melvin D. Synhorst (R); atty. gen., Richard C. Turner (R); treas., Paul Franzenburg; supt. of pub. instr., Paul F. Johnston; chief justice, T. G. Garfield. *Legislature*—General Assembly (met Jan. 9, 1967; convenes Jan. 13, 1969): Senate, 61 members (29 Republicans, 32 Democrats); House of Representatives, 124 members (89 R, 35 D).

Education: *School enrollment* (1965–66)—public elementary, 468,500 pupils (14,800 teachers); public secondary, 190,500 pupils (11,200 teachers); nonpublic schools, 110,400 pupils (4,240 teachers); college and university (fall 1965), 86,588 students. *Public school expenditures* (1965–66)—$299,000,000 ($503 per pupil); average teacher's salary, $6,003.

Public Finance (fiscal year 1966–67): *Revenues*, $881,786,291 (2% sales tax, $113,555,000; motor fuel tax, $102,261,000). *Expenditures*, $816,782,875. *State debt*, $80,540,000 (June 30, 1967).

Personal Income (1966): $8,258,000,000; average annual income per person, $2,992.

Public Assistance (fiscal year 1967): $65,974,901 to 81,000 recipients (aged, $33,063,016; dependent children, $20,274,833).

Labor Force (employed persons, June 1967): *Agricultural*, 294,200; *nonagricultural* (wage and salary earners), 852,200 (25.7% manufacturing, 24.6% trade, 17.6% government). *Unemployed persons* (June 1967)—39,300.

Manufacturing (1966 est.): Value added by manufacture, $3,397,000,000 (transportation equipment, $26,781,000; primary metals, $107,979,000; nonelectrical machinery, $476,926,000; electrical machinery, $252,644,000; fabricated metals, $101,304,000).

Agriculture (1966): *Cash farm income*, $3,670,367,000 (livestock, $2,573,229,000; crops, $887,137,000; govt. payments, $210,001,000). *Chief crops* (tons)—corn for grain, 25,248,944 (ranks 1st among the states); hay, 7,797,000 (rank, 3d); soybeans, 4,205,992 (rank, 2d); oats, 1,627,312 (rank, 2d); popcorn, 67,575 (rank, 1st); sorghum grain, 67,200.

Mining (1966 est.): *Production value*, $116,670,000. *Chief minerals* (tons)—stone, 26,500,000; sand and gravel, 18,000,000; gypsum, 1,256,000; clays, 1,105,000; bituminous coal, 1,050,000.

Fisheries (1965): *Commercial catch*, 3,001,000 pounds ($231,000).

Transportation: *Roads* (1967), 112,308 miles (180,704 km); *motor vehicles* (Dec. 1966), 1,817,017; *railroads* (1966), 11,821 track miles (19,020 km); *airports with scheduled services* (1967), 13.

Communications (1967): *Telephones*, 1,373,900; *television stations*, 13; *radio stations*, 101; *newspapers*, 48.

IRAN

On his 48th birthday, Oct. 26, 1967, Shah Mohammed Reza Pahlavi crowned himself and his 29-year-old wife, Farah, during colorful ceremonies at the Golestan Palace in Teheran. The shah had occupied the throne of Iran for 26 years but had postponed his coronation until a time when he felt the country had vindicated its position as a fully sovereign and independent state and had made significant social and economic progress.

The economic prosperity of the previous two years continued during 1967. The closing of the Suez Canal in early June as a result of the Israeli-Arab war, however, adversely affected Iranian commerce, forcing a rerouting of some oil exports and increasing the carrying charges on many imports. In foreign affairs, Iran maintained its membership in the pro-Western Central Treaty Organization (CENTO) but adopted an increasingly independent stance. Iran kept close ties with the United States and the European Common Market countries but at the same time cemented its recently developed good relations with the Soviet Union and the Communist states of eastern Europe.

IRAN • Information Highlights

ASIA
AFRICA

Area: 636,363 square miles (1,648,182 sq km).
Population: 25,781,000 (Nov. 1, 1967 est.).
Chief Cities (1963 est.): Teheran, the capital, 2,317,116; Tabrīz, 387,803; Isfahan, 339,909; Meshed, 312,186.
Government: *King*—Shah Mohammed Reza Pahlavi (acceded 1941; crowned Oct. 6, 1967); *Premier*—Amir Abbas Hoveida (took office Jan. 27, 1965). *Parliament*—Majlis (National Assembly), 200 members; Senate (2d house), 60 members.
Religious Faiths: Muslims, 98% of population.
Education: *Literacy rate* (1956), 13% of population aged 15 and over. *Total school enrollment* (1965)—2,655,000 (primary, 2,130,000; secondary, 480,000; teacher-training, 4,500; technical, 14,500; higher, 26,000).
Finance (1967 est.): *Revenues*, $1,331,647,000; *expenditures*, $1,622,967,000; *public debt* (1965), $897,000,000; *monetary unit*, rial (75.75 rials equal U. S.$1).
Gross National Product (1967): $6,400,000,000.
National Income (1965): $5,221,000,000; average annual income per person, $211.
Economic Indexes (1966): *Industrial production* (petroleum), 259 (1958=100); *agricultural production* (1965), 124 (1956–57=100); *cost of living*, 134 (1958=100).
Manufacturing (metric tons): Gasoline (1964), 2,502,000; wheat flour (1952), 1,585,000; cement (1965), 745,000.
Crops (metric tons 1966): Wheat, 3,190,000; barley, 1,000,000; rice, 900,000; grapes (1965), 250,000; cottonseed, 238,000; cotton lint, 108,000; citrus fruits (1965), 105,000.
Minerals (metric tons, 1965): Crude petroleum (1966), 106,368,000 (ranks 6th among world producers); salt, 345,000; bituminous coal, 275,000; chromite, 150,000; iron ore, 30,000; sulfur, 20,300; barite, 15,000.
Foreign Trade (1966): *Exports*, $1,309,000,000 (chief export: petroleum, $1,147,000,000); *imports*, $930,000,000 (chief imports, 1964: nonelectrical machinery, $58,670,000). *Chief trading partners* (1965): West Germany (took 3% of exports, supplied 20% of imports); U. S. (took 4% of exports, supplied 17% of imports); Britain (took 13% of exports, supplied 12% of imports).
Transportation: *Roads* (1965), 21,400 miles (34,433 km); *motor vehicles* (1965), 182,500 (automobiles, 135,000); *railways* (1965), 2,174 miles (3,499 km); *merchant vessels* (1966), 4 (52,000 gross registered tons); *national airline*, Iran National Airlines; *principal airport*, Teheran.
Communications (1967): *Telephones*, 213,420; *television stations*, 4; *television sets*, 120,000; *radios* (1965), 1,600,000; *newspapers* (1961), 27.

Provision for a Regency. In internal political developments, the shah undertook to solidify the position and continuity of the monarchy by arranging for the orderly transition of power in case of his incapacity or death. On March 14, Parliament passed legislation calling for the election of a constituent assembly to provide for these contingencies by constitutional amendment. On September 7, the assembly, which had been elected in August, unanimously approved provisions that would permit Empress Farah to serve as regent until 6-year-old Crown Prince Reza becomes 20.

Economic Development. The government's Plan Organization, charged with implementing Iran's economic development program, established a budget of $972.9 million for 1967–68, the final year of the third economic development plan, which had been inaugurated in 1962. At the same time, a fourth economic development plan (1968–73) was announced, looking toward a better-balanced economy through the creation of 1 million new jobs outside agriculture. Total expenditures on the new program were estimated at $4.5 to $5.3 billion, and the government expected that Iran could meet most of those costs out of its own resources. Foreign experts believed that the nation would need at least $300 to $350 million in foreign grants or credits.

Foreign Relations. Iran's improved relations with the Soviet Union were evidenced in 1967 by an arms purchase agreement and by considerably expanded Soviet-Iranian trade. On February 19, Premier Amir Abbas Hoveida informed Parliament that Iran would buy $110 million worth of Soviet military equipment. Payment was to be made over an 8-year period, at first in cotton and light manufactured goods, and after the completion of a pipeline to the Soviet frontier in 1969, in natural gas. This purchase of a limited quantity of Soviet military material in what was essentially a barter deal conserved Iranian foreign exchange but did not fundamentally alter the position of the United States as Iran's major supplier of military equipment. On March 2, Iran signed a new trade agreement with the Soviet Union providing for $540 million worth of trade over a 5-year period.

In late August, following a visit of the shah to Washington, Iran agreed to buy a second squadron of 16 F-4 Phantoms from the United States at an estimated cost of $40 million.

During the Israeli-Arab war and at the emergency special session of the United Nations that attempted in June and July to arrange a settlement of the conflict, Iran adopted a moderately pro-Arab position. The Iranian delegation supported in the General Assembly a Yugoslav resolution that, without condemning Israel as an aggressor, demanded Israeli evacuation of all territories occupied in the war.

Foreign Aid. In 1967 the United States was engaged in terminating its programs of technical assistance, economic grants, and low-interest loans to Iran on the grounds that the country was no longer an underdeveloped area. An agreement was signed on Jan. 16, 1967, however, by which the United States provided $6.5 million in long-term credits to assist Iran in the expansion of its electric power resources. On April 13, the U. S. Export-Import Bank announced a loan of $60 million to the Iranian government to finance the purchase of American equipment for a $172.5 million petrochemical plant. The plant is being constructed at Bandar Shahpur, on the Persian Gulf, by a corporation jointly owned by the government's National Iranian Oil Company and Allied Chemical Corporation of New York.

Iran also received economic aid from the Soviet Union and other Communist countries. The construction of a large steel complex at Isfahan was being financed in part through a Soviet loan, arranged early in 1966, of $268 million. On March 19, 1967, Rumania provided a $31 million credit for the purchase of Rumanian products.

Petroleum Production. Oil production, estimated to have provided revenues of $700 million for the Iranian government in 1967, was still largely in the hands of a consortium of European and U. S. oil concerns that has been in operation since 1954 in behalf of the National Iranian Oil Company. The role of the consortium, however, was being gradually reduced. In March 1967 the international group honored a December 1966 agreement by surrendering over 25,000 square miles (64,750 sq km) of its concession area for direct exploitation by the national oil company or for reassignment to other oil producers. On April 15 the National Iranian Oil Company reached an agreement with the Soviet Union permitting Soviet technicians to explore for oil in Iran.

Work also proceeded throughout the year on the development of an offshore oilfield in the waters of the Persian Gulf. There the Lavan Petroleum Company, jointly owned by the National Iranian Oil Company and four American firms, was opening wells, laying an underwater pipeline, and constructing a deepwater dock. This field was expected to commence production in mid-1968 with a capacity of 1.8 million tons annually, increasing to 10 million tons in 1969.

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IRAQ

A provisional regime headed by President Abdul Rahman Arif continued to govern Iraq in 1967. The transition to a constitutional government, which had been scheduled for May 1967, was postponed because of political factionalism, continued restlessness among the Kurdish minority, a sluggish economy, and declining oil revenues. In June, Iraq joined the United Arab Republic, Syria, and Jordan in the 6-day Israeli-Arab war.

Constitutional Developments. Early in 1967, the cabinet of Premier Naji Talib began preparations for the first national elections to be held since the overturn of the monarchy in the revolution of July 1958. On January 28 it published an electoral law providing compulsory voting for men and permissive voting for women. Representatives of the country's major ethnic, economic, and political groups met in Baghdad on February 24 to discuss the reorganization of Iraq's only legal political party, the Arab Socialist Union.

By late March, however, factional disputes had upset the government's timetable. Elections were postponed, and the 3-year transitional period leading to constitutional government was extended until May 1968. On April 3 a joint session of the cabinet and the Higher Defense Council extended the one-year term of President Arif until a constitutional regime could be instituted.

Cabinet Changes. Premier Talib was unable to persuade the various factions to cooperate, and on May 7 he submitted his resignation. Three days later, President Arif assumed the premiership himself and headed a widely representative 25-member cabinet. The new government promised to reorganize the Arab Socialist Union, to move the country toward constitutionalism, to fulfill promises made to the Kurds of political decentralization and economic reconstruction in the north, to bring about economic prosperity within the framework of Arab socialism, and to speed up the development of mineral resources. It also stated that it would pursue good relations with neighboring Turkey and Iran and continue the policy of close cooperation with the United Arab Republic. On July 10, pleading the pressure of presidential duties, President Arif surrendered the premiership to Lt. Gen. Taher Yahya, who had been prime minister between 1963 and 1965.

Economic Conditions. The Iraqi economy still suffered in 1967 from the effects of political instability and the 1964–65 nationalization program. The government's 5-year development plan (1967–70) called for total expenditures of $2.3 billion, with $380 million budgeted for 1967; but the implementation of projects was often slow and uncertain. The Israeli-Arab war and the closing of the Suez Canal adversely affected Iraq's commerce, and oil production declined. As a result, imports had to be restricted.

Petroleum Production. In a dispute with the internationally controlled Iraq Petroleum Company over pipeline transit payments, the Syrian government blocked the movement of oil from Iraq's northern fields to the Mediterranean coast from Dec. 12, 1966 to March 2, 1967. During that time, oil production in the northern area was virtually halted.

During and following the Israeli-Arab war, there was further curtailment of petroleum production. On June 6, the pipelines to the Mediterranean were closed, and the Iraqi government prohibited the sale of oil to the United States, Britain, and West Germany in retaliation for their alleged aid to Israel. Although the pipelines were reopened in June and

IRAQ • Information Highlights

EUROPE
ASIA
AFRICA

Area: 173,259 square miles (448,742 sq km).
Population: 8,338,000 (July 1, 1966 est.).
Chief Cities (1965 est.): Baghdad, the capital, 1,106,139 (urban area); Basra, 422,879; Mosul, 388,211.
Government: *President*—Maj. Gen. Abdul Rahman Arif (took office April 16, 1966); *Premier*—Lieut. Gen. Taher Yahya (took office July 10, 1967). *Parliament*—Legislative power is exercised by the National Council for the Revolutionary Command.
Religious Faiths: Muslims, 96% of population.
Education: *Literacy rate* (1957), 15% of population aged 15 and over. *Total school enrollment* (1964)—1,216,965 (primary, 957,841; secondary, 221,834; teacher-training, 10,300; technical, 7,179; higher, 19,811).
Finance (1967 est.): *Revenues,* $474,900,000; *expenditures,* $504,800,000; *monetary unit,* dinar (.3571 dinar=U. S.$1).
Gross National Product (1966): $1,800,000,000.
National Income (1964): $1,529,000,000; average annual income per person, $193.
Economic Indexes (1966): *Industrial production* (petroleum), 190 (1958=100); *agricultural production* (1965), 105 (1956–57=100); *cost of living,* 115 (1958=100).
Manufacturing (metric tons, 1965): Cement, 1,285,000; residual fuel oil, 1,239,000; gasoline, 318,000.
Crops (metric tons, 1966): Dates, 320,000 (ranks 2d among world producers); wheat (1967), 866,000; barley (1967), 860,000; rice, 182,000; onions (1965), 106,000.
Minerals (metric tons): Crude petroleum (1966), 68,004,000; salt (1965), 40,000.
Foreign Trade (1966): *Exports,* $939,120,000 (chief exports: petroleum, $864,920,000); *imports,* $493,080,000 (chief imports, 1965: sugar, $40.209,000; artificial piece goods, $19,656,000; tea, $12,768,000). *Chief trading partners* (1965): Britain (took 16% of exports, supplied 11% of imports); France (took 15% of exports, supplied 1% of imports).
Transportation: *Roads* (1964), 12,919 miles (20,791 km); *motor vehicles* (1965), 88,906 (automobiles, 54,504); *railways* (1964), 1,026 miles (1,691 km); *merchant vessels* (1966), 2 (12,000 gross registered tons); *national airline,* Iraqi Airlines; *principal airports,* Baghdad, Basra.
Communications (1967): *Telephones* (est.): 76,000; *television stations,* 1; *television sets,* 175,000; *radios* (1964), 700,000; *newspapers* (1963), 8 (daily circulation, 85,000).

the Arab summit conference at Khartoum (August 29–September 1) authorized full resumption of oil sales, Iraq maintained its embargo against shipments to the three countries throughout the fall.

It was estimated that Iraq's oil production in 1967 would be less than 75% of the 1966 output. To assure increased production and to reduce dependence on the Iraq Petroleum Company, the government entered into negotiations with Italian, French, and other oil concerns to exploit Iraq's undeveloped petroleum resources in partnership with its own national oil company. In November a French government-controlled consortium won a concession to explore for and produce oil in southern Iraq. On December 24 an agreement was signed with the USSR that laid a basis for Soviet technical assistance in the exploitation of Iraqi petroleum and aid in its marketing.

The Israeli-Arab War. As tensions between Syria and the United Arab Republic, on the one hand, and Israel, on the other, increased in mid-May, Iraq offered support to its fellow Arabs. On May 24 the government entered into a military agreement with Syria and, on June 4, signed a protocol making Iraq a partner in the recently negotiated Jordanian-UAR mutual assistance pact. On June 5, following the outbreak of hostilities between Israel and the United Arab Republic, Iraq's air force attacked Natanya in Israel. On the following day, Iraq broke diplomatic relations with the United States and Britain, accusing them of aiding Israel. The acceptance by Jordan on June 7 of the United Nations demand for a cease-fire ended Iraq's limited participation in the war.

During the weeks that followed, President Arif took a leading part in efforts to formulate a common Arab policy, to recoup the losses of the war, and to assure continued Soviet support of the Arab position. On July 3 and 4, President Podgorny of the Soviet Union visited Iraq on his swing through the Middle East, and on July 18, President Arif conferred in Moscow with Soviet leaders. At the emergency special session of the UN General Assembly in June and July, Iraq demanded the condemnation of Israel as an aggressor and immediate Israeli withdrawal from all occupied territories.

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IRELAND

The Republic of Ireland failed once again in 1967 in its attempt to enter the European Economic Community (EEC), or Common Market, and such associated organizations as the European Atomic Energy Community (Euratom).

On May 11 the Irish government reactivated its application for full membership in conjunction with a similar move by Britain. Hoping to strengthen Ireland's case for admission into the EEC, Prime Minister John (Jack) Lynch, who succeeded to the leadership of the governing Fianna Fáil party in November 1966 upon the retirement of Sean Lemass, paid formal visits to the capitals of the EEC countries in late June and July. Accompanied by Minister for Finance Charles Haughey, he won assurances of support from the governments of the Netherlands, West Germany, Belgium, Italy, and Luxembourg. But the opposition of President Charles de Gaulle of France ended both Irish and British hopes of joining the Common Market in the near future.

IRELAND • Information Highlights

Area: 27,163 square miles (70,280 sq km).
Population: 2,880,752 (1966 prelim. census).
Chief Cities (1966 prelim. census): Dublin, the capital, 568,271; Cork, 122,066; Limerick, 55,885.
Government: *President*—Eamon de Valera (took office for 2d 7-year term June 25, 1966); *Prime Minister*—John Mary (Jack) Lynch (took office Nov. 10, 1966). *Parliament*—Seanad Éireann, 60 members; Dáil Éireann (2d house), 144 members (party seating, 1966: Fianna Fáil, 72; Fine Gael, 47; Labour, 22; Clann na Poblachta, 1; Independents, 2).
Religious Faiths: Roman Catholic, 94% of population; Protestants, 5%; others, 1%.
Education: *Total school enrollment* (1964)—671,573 (primary, 497,163; secondary, 99,704; technical, 54,072; higher, 20,634).
Finance (1966 est.): *Revenues*, $769,440,000; *expenditures*, $903,000,000; *public debt*, $2,153,200,000; *monetary unit*, pound (0.417 pounds equal U. S.$1, as of Nov. 18, 1967).
Gross National Product (1966): $2,942,800,000.
National Income (1966): $2,324,000,000; average annual income per person, $806.
Economic Indexes (1966): *Industrial production*, 168 (1958=100); *agricultural production* (1965), 123 (1956–57=100); *cost of living*, 127 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 1,112,400; gasoline, 418,000; beer, 346,000.
Crops (metric tons, 1966): Potatoes, 1,652,000; barley, 628,000; sugar beets, 618,000; oats (1967), 264,000.
Minerals (metric tons, 1965): Peat, 3,792,000 (ranks 2nd among world producers); sand and gravel (1964), 1,881,000; limestone (1964), 1,611,000; gypsum, 218,587.
Foreign Trade (1966): *Exports*, $680,120,000 (chief exports, 1965: cattle, $125,104,000; meat, $75,214,000; dairy products and eggs, $37,836,000; textile yarn and fabrics, $25,961,000); *imports*, $1,043,280,000 (chief imports, 1965: nonelectrical machinery, $119,907,000; motor vehicles, $60,995,000). *Chief trading partners* (1965): Britain (took 70% of exports, supplied 50% of imports); West Germany (took 5% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 52,287 miles (84,145 km); *motor vehicles* (1965), 330,965 (automobiles, 281,448); *railways* (1965), 1,455 miles (2,341 km); *merchant vessels* (1965), 16 (105,000 gross registered tons).
Communications (1967): *Telephones*, 225,000; *television stations*, 20; *television sets*, 395,000; *radios* (1965), 610,000; *newspapers* (1965), 7.

Economic Developments. The Irish economy registered some solid gains in 1967 as external reserves rose to an all-time high of £272 million in August. Government figures indicated that exports increased by almost 20% and imports by 8½% during the first eight months of the year. However, the overall sluggishness of the economy led some experts to call for more investment in the modernization of agriculture and industrial plants and equipment to place the nation's industries in a more competitive position.

Because the Irish economy is so closely linked with that of Britain, Ireland was forced to devalue its pound on November 18, the same day the British pound was devalued from $2.80 to $2.40.

Ireland took part with 52 other nations in the final stages of the Kennedy Round tariff negotiations in Geneva. The result of the accord will be an eventual reduction of tariffs on some 60,000 items for all the signatories of the General Agreement on Tariffs and Trade (GATT).

Elections. On June 28 local elections to the councils were held throughout the country for the first time in seven years. Fianna Fáil, the government party, won about 41% of the votes cast, compared with 33% for Fine Gael, 16% for Labour, and 10% for all other parties. By winning six new seats in Dublin constituencies, the Labour party became the second largest party in the capital.

Education. Minister for Education Donagh B. O'Malley announced on April 18 a plan for the merger of Dublin's famous Trinity College and University College. Under the proposed scheme, a single executive authority would govern the new multidenominational University of Dublin, but the predominantly Protestant Trinity College and Roman Catholic University College would retain most of their traditional identity. Financial considerations played a major role in launching the proposal, but personal attachment to one or the other of the two historic universities prevented a number of Irishmen from enthusiastically supporting the projected merger.

Belfast Meeting. Prime Minister Terence O'Neill of Northern Ireland and Prime Minister Lynch conferred in Belfast on December 11.

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IRELAND, Northern. See Commonwealth of Nations.
ISLAM. See Religion.

ISRAEL

The 1967 event that far overshadowed all others in Israel—and was, indeed, of major international concern—was the "Six Days' War" waged by Israel in June against its Arab neighbors—Syria, Jordan, and the United Arab Republic (Egypt). By the time a cease-fire was effected on June 10, Israel had occupied territory in all three countries.

Background of Conflict. While the Arab states had consistently maintained that, notwithstanding the armistices of 1949, they were still at war with Israel, a more immediate cause of the war was Israel's pumping of irrigation water from the Jordan River from 1964 onward. Collective Arab failure to interrupt this had led the Syrian government to train and equip a military organization (el-Fatah) for sabotage raids into Israel across its extensive armistice lines with Jordan and Lebanon, in addition to direct Syrian-Israeli clashes in the upper Jordan River valley and the Sea of Galilee area.

After Israel had retaliated on April 7, 1967, in a battle in which Israeli aircraft penetrated to within sight of the Syrian capital, Premier Levi Eshkol on May 11 threatened renewed aerial counteraction if the Syrian-inspired raids continued. The Syrian government then invoked its November 1966 defense pact with the UAR, and furnished Cairo with intelligence reports alleging a massive Israeli military buildup. The UAR mobilized its armed forces, ordered the UN emergency force out of the buffer positions in Sinai that it had held since 1957, and proclaimed the resumption of the blockade of Israel's Red Sea port of Elath. The port is Israel's commercial link with Asia and East Africa and the inlet of its pipeline.

War and Occupation. After two weeks of futile international diplomacy, and amid Arab propaganda and visions of victory, Israel replied on June 5 with an air and land offensive. The six days of fighting relieved Israel of the threat of slow strangulation and gave it shorter and more defensible borders. With the cease-fire, Israel held the Golan highlands from which the Syrian forces had harassed it; the entire West Bank of the Jordan River; the Old City of Jerusalem; the Gaza Strip; and the entire Sinai Peninsula west to the Suez Canal, except for the town of Port Fuad opposite Port Said.

While the United Nations had in 1947–48 fruitlessly recommended the internationalization of Jerusalem, Israel on June 28 proclaimed the absorption of the Arab sector of the divided city and announced plans to reconstruct the former Jewish quarter within the medieval walls, evicting Arab refugees settled there since 1949. Israel announced in September the resettlement of two localities, one near Hebron and the other near Jericho, that it had had to abandon in the 1948 war, and the settling of outpost positions in the Golan heights.

Aftermath of the War. Through the mediation of the International Red Cross, Israel parleyed with the Jordan government over readmitting to the West Bank some 200,000 Arabs who had fled east across the Jordan River during and after the June fighting. The Jordanian radio, however, called on those returning to harass the Israeli authorities, and by August 31 (the deadline imposed by Israel), Israel had issued permits to only 20,000 of some 130,000 applicants. An Israeli offer in October to accept some 40,000 more returning Arabs contained conditions unlikely to satisfy the Jordanian government.

Meanwhile, initial Israeli hopes of cooperation from the mayors of Arab West Bank towns were marred by strikes by teachers and others, which led Israel to deport five Arab notables in September. A wave of sabotage attacks, directed from Syria with Jordan's connivance, was answered by the Israeli Army's capture of some 270 raiders and the demolition of houses believed to be used by saboteurs.

In the UN General Assembly debate on the crisis, Israel insisted on Arab recognition and direct negotiation with Israel. These tortuous maneuvers were punctuated by artillery and aerial exchanges across the Jordan River and the Suez Canal, which the UAR blocked with sunken ships.

PICTORIAL PARADE

MOSHE DAYAN was appointed defense minister of Israel on June 1, 1967, shortly before the outbreak of war between Israel and its Arab neighbors. Following the Israeli victory in the 6-day struggle, he met with UN officials to arrange for a truce. In reply to demands that Israel restore conquered Arab territories, Dayan declared that direct negotiation between Israel and the Arab states was a prerequisite of a territorial settlement.

Dayan was born on a kibbutz at Deganiya, Palestine, on May 20, 1915. He was educated at an agricultural high school at Nahalal and received his military training as a member of Haganah, the Jewish militia. Later he served as an aide to British Capt. Orde Wingate. In 1939, when Haganah was outlawed, he was imprisoned by the British, but he was later released for World War II intelligence work in Syria. As a colonel in the Israeli Army he fought with distinction in the war against Arab forces in 1948–49. As chief of staff, he led Israeli forces to victory in the 1956 Sinai campaign.

ISRAELIS of all ages pitch in to prepare their country for war with Arab neighbors prior to the hostilities in June.

PARIS MATCH

On October 21, just as the British and Egyptian governments were reporting progress in talks that London hoped might lead to the reopening of the canal, Egyptian ships using Soviet rockets sank a British-built Israeli destroyer patrolling close to the 12-mile-limit of Egyptian territorial waters. Israel replied three days later by shelling the oil refinery at the port city of Suez, destroying some 80% of the UAR's refining capacity. A Soviet flotilla was moved to Port Said as a warning to Israel, and Egyptian spokesmen renewed their complaints of U. S. partisanship for Israel. Meanwhile, the U. S. State Department was reputed to be more conciliatory toward the Arabs.

On November 22 the UN Security Council unanimously adopted a British resolution embodying conditions for establishing peace in the Middle East: withdrawal of Israel from occupied Arab territories; the end of all states of belligerency; and acknowledgment of the territorial integrity and political independence of all countries in the area. A representative (Gunnar Jarring, a Swedish diplomat) was dispatched by the United Nations to promote agreement, but the immediate prospects for his success were not good.

(See also MIDDLE EAST; UNITED NATIONS.)

Economic Affairs. Before the June fighting, the campaign against chronic inflation and balance-of-payments deficits had produced in Israel an unprecedentedly high level of unemployment. This was only temporarily relieved by the mobilization of the armed forces. Finance Minister Pinhas Sapir, appealing in New York in October for renewed efforts by the Israel Bond Organization to restore the "dislocated economy," admitted that the war had cost hundreds of millions of dollars. While fund-raising abroad appreciably increased Israel's hard-currency reserves, a conference of 60 wealthy Jewish businessmen from 13 countries, convened in Jerusalem in August, told officials that private investment in Israeli industry was discouraged by limitless bureaucracy, heavy taxation, and the immense power of the Histadrut labor union.

The reuniting of divided Jerusalem and the opening up of the West Bank gave an immediate stimulus to tourism from abroad, though this depended on Israel's ability to maintain security against Arab guerrilla attacks. In the absence of negotiations with Jordan, Israeli policymakers contemplated the creation on the West Bank (with its population of 600,000, plus 70,000 Arabs in annexed Jerusalem) of an autonomous Arab state economically linked with

ISRAEL • Information Highlights

EUROPE
ASIA
AFRICA

Area: 7,992 square miles (20,700 sq km).
Population: 2,678,000 (April 30, 1967).
Chief Cities (1965 est.): Jerusalem, the capital, 191,700; Tel Aviv-Jaffa, 392,100; Haifa, 204,500; Ramat Gan, 102,600.
Government: *President*—Zalman Shazar (took office May 21, 1963); *Premier*—Levi Eshkol (took office Jan. 12, 1966). *Parliament*—Knesset, 120 members (party seating, 1967: Mapai and Achduth Ha Avoda, 45; Herut Liberalim, 26; National Religious, 11; Rafi, 10; Mapam, 8; Independent Liberal, 5; others, 15).
Religious Faiths: Jews, 89% of population; Muslims, 8%.
Education: *Literacy rate* (1961), 84% of population aged 14 and over. *Total school enrollment* (1964)—571,697 (primary, 448,584; secondary, 61,913; special and higher, 61,200).
Finance (1967 est.): *Revenues*, $1,253,500,000; *expenditures*, $1,192,600,000; *monetary unit*, Israeli pound (3 pounds equal U. S.$1; effective Nov. 19, 1967, 3.5 pounds equal U. S.$1).
Gross National Product (1966): $3,953,605,000.
National Income (1966): $3,037,030,000; average annual income per person, $1,155.
Economic Indexes (1966): *Industrial production*, 245 (1958=100); *agricultural production* (1965), 255 (1956–57=100); *cost of living*, 158 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,167,600; gasoline (1965), 429,000; wheat flour, 249,600; oil cake (1965), 186,000; sugar, 40,000; soya oil (1965), 28,807.
Crops (metric tons, 1965–66 crop year): Citrus fruits, 996,000; sugar beets, 295,000; wheat, 150,000.
Minerals (metric tons, 1965): Potash, 500,000; phosphate, beneficiated, 388,000; crude petroleum (1966), 187,200.
Foreign Trade (1966): *Exports*, $503,300,000 (chief exports: diamonds, $189,481,000; citrus fruits, $88,091,200); *imports*, $832,600,000 (chief imports, 1965: diamonds, $110,726,000; nonelectrical machinery, $95,638,000; motor vehicles, $46,222,000). *Chief trading partners* (1966): U. S. (took 15% of exports, supplied 26% of imports); Britain (took 12% of exports, supplied 19% of imports).
Transportation: *Roads* (1965), 4,911 miles (7,904 km); *motor vehicles* (1965), 133,960 (automobiles, 89,400); *railways* (1965), 284 miles (457 km); *merchant vessels* (1966), 84; *national airline*, El-Al.
Communications (1967): *Telephones*, 301,008; *television sets*, 30,000; *radios* (1963), 595,000; *newspapers* (1963), 24 (daily circulation, 339,000).

Israel, as proposed by the United Nations in 1947. To make the economy of such a state viable, however, would require long-term financial aid from Israel unless international support could be found. And such support—like that for an ambitious proposal to build nuclear-powered plants for the large-scale distillation of sea water—was awaiting nonexistent signs of a lowering of Israeli-Arab tension.

In November, in the wake of Britain's devaluation, Israel devalued its currency by 14.3%. It was expected that this stringent measure would help ease the basic problems of Israel's economy.

Political Affairs. Just before the war, Premier Eshkol had yielded to public pressure and widened his coalition government, appointing as defense minister Maj. Gen. Moshe Dayan, who had accompanied the former Premier David Ben-Gurion in the "Rafi" secession from Eshkol's Mapai party in 1965. Talks aimed at the reintegration of Rafi into a united labor party that would have a near-absolute majority in the Knesset were successful in January 1968, but the struggle for control persisted, with a revolt against Eshkol still a possibility.

Behind the public demonstrations of antagonism between Eshkol and Dayan there was essentially a conflict of age groups, in which the 72-year-old premier represented the Zionist old guard (largely immigrants from eastern Europe), while a younger generation favored the succession of Dayan or of Yigal Allon, the minister of labor. Both these men, aged 52 and 49 respectively, were born in Israel, spoke Arabic, had distinguished military records, and were reputed to have a more realistic approach to the issues that would decide Israel's next election in 1969.

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ITALIAN LITERATURE

The competition for Italian literary prizes was not as lively in 1967 as it has sometimes been in recent years. The main awards failed to provoke the controversy they have so often in the past.

Prize Fiction. The greatly coveted Strega Prize went to *Poveri e semplici,* a new novel by Anna Maria Ortese, an author who is respected in Italian literary circles as a person of high moral qualities and endurance. She was previously known for her neorealistic novel *Il mare non bagna Napoli,* and for her fantasy *Iguana.* In the prizewinning *Poveri e semplici* she has tried to portray a group of Communist youths in post-war Milan who endure hardships and gradually lose their political illusions.

A more colorful prize-winner was *Il gabbiano azzurro* by Raffaelo Brignetti. This collection of short stories, winner of the Viareggio Prize, exalts the freedom of the sea, the beauty of the Mediterranean islands, and the mysteries of the ocean depths.

The most interesting author among the winners of minor literary prizes was Luigi Santucci. The hero of his prize-winning novel *Orfeo in paradiso* recalls his own childhood and then goes back in time to reconstruct his mother's life until the day of his own birth.

Other Fiction. Despite all the publicity given the prize laureates, the Italian public made best sellers of books by other authors. Leading the 1967 list of popular fiction was *La cosa buffa* by Giuseppe Berto, published at the end of 1966. This unusual love story of a poor Venetian student and a girl from a rich bourgeois family sold thousands of copies—even though it is a difficult book to read. Written in an original stylistic key, some sections of *La cosa buffa* sound like a parody of the 19th century narrative style. However, Berto's language is actually animated by a truly modern spirit of irony, humor, and psychological sophistication.

The popular success of Renato Chiotti's *Lo Scacco alla regina* is due not so much to its artistic merit as to its provocative subject matter. It tells of the sadomasochistic experiences of a rich and beautiful young woman who is engaged as the servant-slave of a despotic movie star.

Another popular novel, *I cattivi pensieri* by Sandro de Feo, also deals with sexual problems, but in a less pathological way. The hero of this novel loves his wife because she is so naturally feminine, but he ultimately contaminates her with his own intellectuality, and their marital relations suffer a dangerous reversal.

A short novel that attracted many readers in 1967 was Ercole Patti's *Un bellissimo novembre.* It portrays the passion of an adolescent for his young and flighty aunt.

Other widely read works were *Una cosa è una cosa,* a collection of 49 tales by Alberto Moravia; *Le notti della paura,* by Antonio Barolini, a novel about the Italian resistance movement in 1944; *L'assoluto naturale* by Goffredo Parise, a half-fictional dissertation on alienation in love; and *Violenza* by Maryse Ferro, a grim Gothic novel of passion and death.

The well-known representatives of the Italian school of neorealism continued to write in their usual manner, which appears quite dated today. Carlo Cassola's *Storia di Ada* is dry, linear, and monotonous; and Vasco Pratolini's *Allegoria e delusione,* the third volume of his historical chronicle of the Italian labor movement, lacks the freshness and vivacity of his early Tuscan novels.

On the other hand, the avant-garde writers also failed to produce anything significant, with the possible exception of Edoardo Sanguinetti, whose bizarre novel *Il gioco dell'oca* appeared in 1967.

Nonfiction. *Eros e Priapo* by Carlo Emilio Gadda, an outstanding chronicle of the Fascist era written with passion and indignation in the author's inimitable style, was published in 1967. Using newly coined words, mixing dialect with refined literary idiom, and alternating fantastic metaphors with verbal twists, Gadda depicts Italy as a raped victim of brutality, and offers a psychological and sexological interpretation of Mussolini's dictatorship.

Among books of a more academic character, *Storia delle crociate* by Francesco Tognasso emerges as a work of scholarship and imagination. Prizes were awarded to *Pensiero storico classico* by Santo Mazzarino and *Idea di città nel mondo romano* by Lydia Storono. Indro Montanelli's popular histories of Italy in various periods sold enormously well.

The centenary of Luigi Pirandello's birth gave rise to numerous essays and monographs on the playwright. The deaths of Emilio Cecchi, the dean of Italian literary critics, and of Enrico Emanueli, an outstanding journalist, were widely noted in the Italian press.

Poetry. The Viareggio Prize for poetry was awarded to the octogenarian Diego Valeri for his distinguished lifework, which includes numerous collections of poems, translations, and critical essays.

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ITALY

KEYSTONE

CAGE holds 152 alleged members of the Sicilian Mafia, brought to trial in October. Because the Catanzaro court was not big enough, case was heard in a gymnasium.

ITALY

The Italian economy fully recovered in 1967 after the devastating floods of late 1966. The nation's "center-left" government suffered some strains but remained intact as the country prepared for parliamentary elections in June 1968.

POLITICAL DEVELOPMENTS

Parliamentary debate in 1967 focused on economic issues. On February 9, Premier Aldo Moro's coalition government of Christian Democrats and Socialists suffered a narrow defeat in the Senate when it sought to impose a temporary freeze on welfare workers' wages. Although the coalition was split on this issue, the government decided not to resign, and on February 14 it won a vote of confidence.

A month later the Chamber of Deputies rejected Communist criticisms of the government's agricultural policies. Next it proceeded on March 17 to pass (306 to 203) the government's proposed 5-year economic plan for 1966–70. The Senate concurred on July 25. The 5-year plan is designed to achieve an annual average growth rate of 5%. On July 31 the cabinet approved a record $15.7 billion budget for 1968.

Sicilian Crisis. A political crisis in Sicily, stemming from the fall of the regional government in December 1966 amid charges of Mafia penetration, also aroused much controversy.

As Sicily prepared in May to celebrate the 20th anniversary of its regional autonomy, public confidence in the island's ability to govern itself effectively seemed to have reached a low ebb. Yet when elections took place on June 11 for a new Sicilian Assembly, the center-left ruling coalition won 54 seats, one more than in the previous election. The Communist party suffered a 10% loss of strength.

Other Issues. Elections also took place on the mainland in June and November for various municipal councils. There the Communists held their losses to a lower figure than in Sicily. In general, these elections bolstered the center-left coalition. Meanwhile, it was reported in April that membership in the Italian Communist party was down to 1,467,000—some 7% below 1966.

In the last half of 1967, Parliament approved an amendment to the constitution fixing the future terms of judges of the Constitutional Court at 9 years, without possibility of reappointment. Under the previous arrangement the term was 12 years.

The possibility of legalizing divorce under certain conditions came to the fore in January when the constitutional committee of the Chamber of Deputies ruled that such legislation was permissible, despite Vatican opposition.

Some anticlerical elements in the government wished to carry opposition to Church involvement in Italian affairs further and have Parliament terminate completely Italy's 1929 Concordat with the Vatican. Premier Moro proposed a compromise, calling for revision of certain clauses in the treaty. On October 5 his government won a vote of confidence on this policy in the lower house (304 to 204).

On October 31, after two weeks of filibuster from rightist foes, the Chamber of Deputies ap-

KEYSTONE

PREMIER Aldo Moro, after a temporary defeat for his government in the Senate, later won a vote of confidence.

ALDO MORO, premier of Italy, managed to retain control of his center-left coalition government in 1967 and continued to support the Atlantic alliance, western European unity, and improved East-West relations. In January he received Soviet president Nikolai Podgorny in Rome, and in April he conferred with President Lyndon B. Johnson in Cologne. In May he met with heads of Common Market nations in Rome.

Moro was born on Sept. 23, 1916 in the town of Maglie in southeastern Italy. He studied law at the University of Bari and taught there after obtaining his doctorate in 1940. A Christian Democrat, he entered national politics in 1946, became minister of justice in 1955, and was elected political secretary of his party in 1959. On Dec. 5, 1963 he formed the first coalition government since 1947 that included left-wing Socialists, and he became Italy's youngest premier.

proved a bill calling for elections in 1969 of semi-autonomous regional governments that have yet to be organized throughout the republic.

In December the Christian Democratic party held its 10th congress in Milan. It reaffirmed the center-left coalition and sought to give assurances that the party would not be a tool of the Vatican. It also emphasized that no Communists would be admitted to the government in the foreseeable future.

NATIONAL DEFENSE

On February 5, Italy launched an 8,850-ton guided missile cruiser the *Vittorio Veneto*, which will become the Italian navy's flagship. A month later Italy's first submarine built since World War II, the *Enrico Toti*, slid down the ways.

In January, President Giuseppe Saragat opened the NATO Defense College, which had been transferred from Paris to Rome. That same month Gen. Guido Vedovato succeeded Gen. Umberto de Martino as NATO Chief of Allied Land Forces, Southern Europe. In April, General Vedovato also assumed the post of Italian army chief of staff.

FOREIGN AFFAIRS

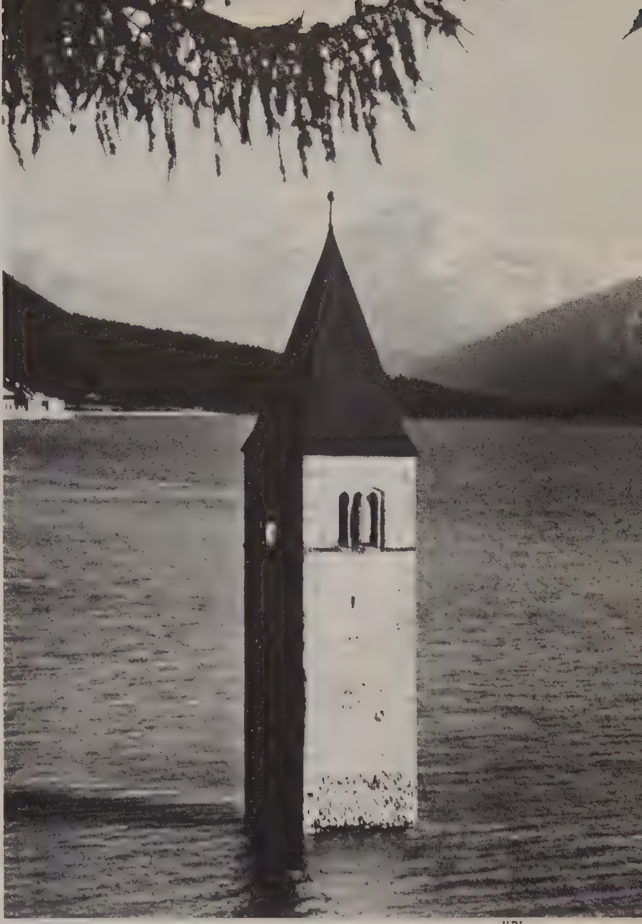
One of the most interesting developments in foreign relations during 1967 was the week-long visit in January by President Nikolai Podgorny of the USSR. He was the first Russian head of state to go to Italy since the visit of Nicholas II in 1909. Podgorny held talks with President Saragat, Premier Moro, and Communist party leader Luigi Longo. He also conferred with Pope Paul VI.

Italo-Soviet Accord. A joint communiqué issued by Presidents Saragat and Podgorny declared their agreement on the importance of "peaceful coexistence"; the need for general nuclear disarmament under effective international control; the desirability of studying further the possibilities of a general European conference to bring about better relations between eastern and western Europe; and a shared "concern over the situation in Vietnam, which is a danger to peace." The communiqué also expressed satisfaction at the extension of bilateral Italo-Soviet cooperation in economic, scientific, technical, and cultural fields, and stressed the importance of the

ITALY • Information Highlights

EUROPE
AFRICA

Area: 116,303 square miles (301,225 sq km).
Population: 51,945,000 (Aug. 31, 1966 est.).
Chief Cities (1964 est., communes): Rome, the capital, 2,455,302; Milan, 1,666,300; Naples, 1,220,639; Turin, 1,116,631.
Government: *President*—Giuseppe Saragat (took office Dec. 28, 1964); *Premier*—Aldo Moro (took office Dec. 5, 1963). *Parliament*—Senate, 321 members (party seating, 1967: Christian Democrats, 134; Communists, 82; Socialists, 46; Italian Social Movement, 17; others, 42); (name of 2d house): Chamber of Deputies, 629 members (party seating, 1967: Christian Democrats, 260; Communists, 166; Socialists, 95; Italian Social Movement, 26; Liberals, 38; others, 44).
Religious Faiths: Roman Catholics, 99.4% of population; others, 0.6%.
Education: *Literary rate* (1961), 91.6% of population aged 6 and over. *Total school enrollment* (1964)—7,662,588 (primary, 4,514,886; secondary, 2,000,259; teacher-training, 178,596; technical, 707,489; higher, 261,358).
Finance (1967 est.): *Revenues*, $12,500,000,000; *expenditures*, $14,300,000,000; *public debt* (1965), $19,318,000; *monetary unit*, lira (625 lire equal U. S.$1).
Gross National Product (1966): $61,435,200,000.
National Income (1966): $49,065,600,000; average annual income per person, $962.
Economic Indexes (1966): *Industrial production*, 200 (1958=100); *agricultural production* (1965), 119 (1956–57=100); *cost of living*, 132 (1958=100).
Manufacturing (metric tons, 1966): Cement, 22,368,000; crude steel, 18,226,000; gasoline (1965), 8,563,000; wine, 6,514,000; sugar, 1,342,000; meat, 1,128,000.
Crops (metric tons, 1966–67 crop year): Grapes, 10,239,000 (ranks 1st among world producers); tomatoes, 3,469,000 (world rank, 2d); apples, 2,584,000 (world rank, 2d); olives, 1,950,000 (world rank, 1st).
Minerals (metric tons, 1965): Mercury 57,291 flasks (76 pounds each) (ranks 2d among world producers); gypsum, 2,400,000.
Foreign Trade (1966): *Exports*, $8,047,060,000 (chief exports, 1965: nonelectrical machinery, $1,038,226,000; transport equipment, $708,723,000; textile yarn and fabrics, $638,427,000; fruit and nuts, $355,824,000); *imports*, $8,587,200,000 (chief imports, 1965: petroleum, $930,472,000; cereals and preparations, $497,496,000; textile fibers, $421,408,000). *Chief trading partners* (1965): West Germany (took 21% of exports, supplied 15% of imports; U. S. took 9% of exports, supplied 13% of imports); France (took 10% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 120,918 miles (194,593 km); *motor vehicles* (1965), 6,141,700 (automobiles, 5,468,981); *railways* (1965), 10,313 miles (16,594 km); *merchant vessels* (1966), 586 (5,524,000 gross registered tons); *state airline*, Alitalia; *principal airports*, Rome and Milan.
Communications: *Telephones* (1966): 5,980,702; *television stations* (1965), 61; *television sets* (1965), 6,045,000; *radios* (1965), 10,724,000; *newspapers* (1965), 92.



UPI

STEEPLE is all that can be seen of a church inundated by the waters of the Lago de Résia reservoir, a water storage area newly created by damming the Adige River in the north of Italy. The river, which flows down from the Italian Alps, is an important source of hydroelectric power.

agreement whereby the Italian firm of Fiat is to manufacture automobiles in the USSR.

The two chiefs of state revealed that talks were under way to facilitate construction of a pipeline to bring natural gas from the USSR to Italy; that an Italian industrial fair would be held in Moscow in 1968; that negotiations would soon begin for an agreement on oceangoing shipping between the two countries; and that an Italo-Soviet consular convention had been initialed.

In mid-May, Foreign Minister Amintore Fanfani traveled to Moscow for talks. He and Soviet Foreign Minister Andrei Gromyko signed the Italo-Soviet consular convention and other accords that had been initialed during Podgorny's recent visit to Italy. Simultaneously, the Italian airline Alitalia inaugurated service between Italy and Moscow.

European Matters. Relations with Austria were under strain in 1967 as a result of continuing disagreement over the status of German-speaking inhabitants of the South Tyrolean provinces of Italy. Although the Sudtiroler Volkspartei in Bolzano province approved on March 22 a "package" offer of autonomy made unilaterally by the Italian government, many South Tyroleans remained dissatisfied, and terrorism increased. On July 8, Austria threatened to take the case to the United Nations. Italy responded by threatening to oppose Austrian efforts for association in the Common Market and the European Steel and Coal Community.

The 10th anniversary of the Treaties of Rome that established the European Economic Community (EEC) and the European Atomic Energy Community (Euratom) was commemorated in Rome's Campidoglio on May 29 when President Saragat welcomed French President Charles de Gaulle and the foreign ministers of the member states. Italy tried in vain to persuade de Gaulle to modify his opposition to early admission of Britain into the EEC.

Relations With the United States. Italo-American relations continued to be good though not quite as serene as in previous years. Washington's efforts to win Italian support for the nuclear nonproliferation treaty and U. S. policies in Vietnam did not find an enthusiastic response.

When Vice President Hubert Humphrey visited Italy on March 30–April 3, he was spattered with paint at the Rome Opera House by demonstrators protesting American policy in Vietnam. Humphrey's talks with Italian officials were concerned chiefly with the nonproliferation treaty, the Kennedy Round of tariff negotiations, and problems of international monetary stability. During talks with Pope Paul VI, Humphrey discussed both Vietnam and the Vatican's plea for an intensified campaign against famine.

On September 18–19, President Saragat and Foreign Minister Fanfani visited President Johnson in Washington in the course of a three-week world tour. They made it clear that they were authorized to affirm Italy's basic support of NATO as a "fundamental guarantee of peace and security." They expressed reservations, however, about key provisions in the proposed treaty on nuclear nonproliferation. In their estimation, the present nuclear powers were asking too much of countries that did not possess nuclear weapons and giving too little in return.

KEYSTONE

LEGALIZED DIVORCE is urged by posters shown at a December 1967 meeting of a new group favoring civil divorce laws in Italy. A divorce bill introduced the previous January received the expected opposition from the Vatican.

In the course of a round-the-world flight that took him first to Australia and Vietnam, President Johnson stopped briefly in Rome on December 23 for talks on Vietnam with Pope Paul VI, President Saragat, and others.

Other Developments. Italy's relations with Communist China were strained during the year. From July to September the Italian government cordoned off Chinese ships near Venice and Genoa, charging that their crews were spreading propaganda. In retaliation, Red Guards in Peking subjected the chief of the Italian trade mission to a trial on August 17.

During the Middle Eastern crisis in June, Italy tried hard to preserve amicable relations with both the Arab world and Israel. After hostilities broke out, however, Premier Moro criticized the Soviet Union for shipping arms to the Middle East and defended Italy's pro-Western voting record in the United Nations. On July 14, Moro's government, in the face of Communist attacks, won a vote of confidence on foreign policy.

On October 4, Italy's representative at the UN General Assembly, Sen. Attilio Piccioni, called upon the world body to take steps to reopen the Geneva conference on Vietnam.

ECONOMY

In 1967 an ebullient Italian economy stood in sharp contrast to the stagnation elsewhere in the European Economic Community.

Growth. Overcoming the shock of the devastating floods of November 1966, Italy in 1967 attained a gross national product calculated at about $66.7 billion. In current monetary terms, this represented an 8.6% growth rate, while in constant (1963) prices it indicated a growth rate of at least 5.7%—one of the highest growth rates in the industrialized world.

Industrial production rose by 9.1%, compared with 8.5% in 1966. There were bumper crops of wheat, fruits, vegetables, and olive oil. Construction, which had lagged for three years, made big gains.

For the third straight year, Italy managed to keep prices, wages, and cost of living indexes in reasonable balance. Retail prices rose by only 3.3%, while wholesale prices remained stable. Industrial wages went up by 4%, according to official figures, although some analysts insisted that the total bill was really 6%. As of October 1967 the unemployed represented 3.4% of the labor force, a slight decrease from 1966.

Foreign Trade. Despite economic troubles in West Germany (Italy's chief customer), exports increased, but only by 7.8%, compared with 11.6% in 1966. Imports rose by 13.1% (compared with the rise in 1966 of 16.2%), reflecting the continued demand for tools and raw materials. Thanks to a record tourist season and to other "invisible trade" items, Italy enjoyed a balance of payments surplus of some $360 million. Gold and foreign exchange reserves rose 11.5%.

Five-year Plan. Final enactment by Parliament in July 1967 of the 5-year economic development plan for 1966–70 was expected to open the way for further economic gains. The plan stresses improvement of education and health, and it anticipates a gross national product of $71.84 billion by 1970. It proposes to achieve an average annual growth rate of 5% and to increase the rate of investment in southern Italy by an average of $524 million a year.

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IVORY COAST

The Ivory Coast in 1967 continued its remarkable economic expansion while maintaining political stability. There were diplomatic conflicts with Guinea during the year.

Internal Affairs. Of 315 students arrested on January 22 for demonstrating against the government, 30 were expelled from the University of Abidjan. In August dockworkers in Abidjan engaged in wildcat strikes that threatened to tie up the port.

The last seven political prisoners held by the Ivory Coast government—some of whom had been involved in an attempted coup in December 1964—were released on May 13.

Economic Affairs. Approximately $300 million in public investments have been made in the Ivory Coast in the period from independence in 1960 until 1966. A trade surplus averaging $45 million has existed every year since independence, and the gross national product has risen about 10% annually.

Foreign Affairs. On February 19 the Guinean government seized an Ivory Coast fishing trawler, with a 22-member crew, for its alleged part in a

IVORY COAST • Information Highlights

ASIA
AFRICA

Area: 124,503 square miles (322,463 sq km).
Population: 3,920,000 (UN 1966 est.).
Chief City (1963 est.): Abidjan, the capital, 246,700 (urban area).
Government: *President*—Félix Houphouët-Boigny (took office Nov. 27, 1960). *Parliament*—National Assembly, 85 members (all belonging to the Ivory Coast Democratic party).
Religious Faiths: Tribal religions, 65% of population; Muslims, 23%; Roman Catholic, 8.3%; others, 3.7%.
Education: *Total school enrollment* (1964–65)—458,434 (primary, 425,251; secondary, 28,541; technical, 2,704; higher, 1,938).
Finance (1966 est.): *Revenues*, $147,500,000; *expenditures*, $147,500,000; *monetary unit*, CFA franc (246.85 francs equal U. S.$1).
Gross Domestic Product (1966): $1,089,450,000.
National Income (1966): $850,500,000; average annual income per person, $226.
Cost of Living Index (1966): 122 (1960=100).
Manufacturing (metric tons, 1965): Lumber, 258,000 cubic meters.
Crops (metric tons, 1965–66 crop year): Sweet potatoes and yams, 1,900,000 (ranks 4th among world producers); cassava, 1,230,000; maize, 179,000; bananas, 138,000; coffee (1966–67), 138,000; cocoa beans (1966–67), 121,000; millet, 52,000.
Minerals (metric tons, 1965): Manganese ore, 179,749; columbium and tantalum (1964), 1.5; diamonds, 198,000 carats.
Foreign Trade (1966): *Exports*, $310,473,000 (chief exports: coffee, $122,796,000; wood, $75,289,000; cacao, $53,217,000); *imports*, $257,620,000 (chief imports, 1965: meat, $33,546,000; textile yarn, $33,490,000; transport equipment, $27,150,000). *Chief trading partners* (1965): France (took 36% of exports, supplied 71% of imports); U. S. (took 14% of exports, supplied 5% of imports); West Germany (took 6% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 20,412 miles (32,849 km); *motor vehicles* (1965), 57,928 (automobiles, 32,467); *railways* (1964), 405 miles (652 km); *merchant vessels* (1966), 4 (20,000 gross registered tons); *civil airline*, Air Afrique; *principal airports*, Abidjan-Port-Buet.
Communications: (1967): *Telephones*, 19,458; *television station*, 1; *television sets*, 2,000; *radios* (1965), 60,000; *newspapers* (1965), 1 (daily circulation, 10,000).

plot to kidnap former Ghanaian president Kwame Nkrumah. In retaliation, the Ivory Coast on June 26 detained Guinea's foreign minister Louis Lansana Beavogui and UN representative Achkar Marof, when bad weather forced their plane to land at Abidjan. Through UN intervention, an exchange of hostages took place on September 21–25.

On January 23 the Ivory Coast formally estab-ished diplomatic relations with the Soviet Union, and Soviet diplomats arrived in Abidjan in May to set up an embassy. The Ivory Coast signed trade agreements involving exchanges totaling $7 million with Poland (May 16) and Hungary (May 31).

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JAMAICA

The death on April 11 of Prime Minister Sir Donald Burns Sangster caused a change in Jamaica's top leadership in 1967. Sangster, who became prime minister on February 22, had served as acting prime minister since January 1965. The controlling Jamaica Labour Party (JLP) immediately named Minister of Foreign Affairs, Hugh Shearer, as prime minister.

JAMAICA • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 4,232 square miles (10,962 sq km).
Population: 1,860,000 (Dec. 31, 1966 est.).
Chief Cities (1960 census): Kingston, the capital, 123,403; Montego Bay, 23,610; Spanish Town, 14,706.
Government: *Governor-General*—Sir Clifford Campbell (appointed 1962); *Prime Minister*—Hugh Shearer (took office Apr. 11, 1967). *Parliament*—Senate, 21 members (nominated by Prime Minister, 13; by Leader of Opposition, 8); House of Representatives, 53 members (party seating, 1967: Jamaican Labour party, 33; People's National party, 20).
Religious Faiths: Protestants, 74% of population.
Educaton: *Literacy rate* (1960), 81.9% of population aged 15 and over. *Total school enrollment* (1964–65)—346,224 (primary, 324,127; secondary, 20,539; higher, 1,558).
Finance (1966 est.): *Revenues*, $162,960,000; *expenditures*, $195,440,000; *monetary unit*, pound (0.3571 pound equals U. S.$1).
Gross National Product (1966): $944,160,000.
National Income (1966): $784,000,000; average annual income per person, $422.
Cost of Living Index (1966): 125 (1958=100).
Manufacturing (metric tons): Sugar (1966), 485,000; cement (1966), 355,200; gasoline (1964), 132,000.
Crops (metric tons, 1965–66 crop year): Sweet potatoes and yams (1964–65), 215,000; bananas, 200,000.
Minerals (metric tons): Bauxite (1966), 9,228,000 (ranks 1st among world producers); limestone, 4,300,000.
Foreign Trade (1966): *Exports*, $224,896,000 (chief exports, alumina, $54,096,000; bauxite, $51,604,000; sugar, $48,580,000); *imports*, $320,852,000 (chief imports, 1965: nonelectrical machinery, $28,554,000; crude petroleum, $27,734,000). *Chief trading partners* (1965): U. S. (took 37% of exports, supplied 30% of imports); Britain (took 27% of exports, supplied 24% of imports).
Transportation: *Roads* (1965), 9,581 miles (15,416 km); *motor vehicles* (1965), 63,519; *railways* (1965), 205 miles (330 km); *merchant vessels* (1966), 2; *national airline*, Air Jamaica; *principal airports*, Kingston, Montego Bay.
Communications: *Telephones* (1966): 49,293; *television stations* (1965), 7; *television sets* (1965), 25,000; *radios* (1965), 350,000; *newspapers* (1965), 2.

Politics. On February 21 the JLP won the national elections with a narrow popular margin of 5,000 votes over the People's National party (PNP). The JLP won 33 seats and the PNP 20, in a House of Representatives expanded from 45 to 53 seats. In two subsequent by-elections in June, the new Labour government retained its seats by increased margins.

Argument was lively during the preelection period, which was characterized by incidents of violence. The PNP, led by Norman Manley, charged that some districts had been gerrymandered by the government when the number of constituencies had been increased. The PNP also claimed that thousands of voters had been disfranchised, and cited the reduction of voter registration roles by 255,000 from the 1962 elections.

In the PNP, the younger generation appeared to be winning control, and Norman Manley's son Michael, a union leader, was regarded as Manley's most likely successor.

Economy. The government continued to press for economic development. Pioneer-industry status was awarded to 28 companies, and the United Nations Special Fund agreed to set up a training center in production techniques in Jamaica. The first local tire factory, operated by Goodyear, began production. The government announced a 10-year $180 million urban renewal plan for Kingston. Tourism, now Jamaica's second industry, increased 20%.

However, some adverse developments marred these advances. Jamaica's foreign trade imbalance increased significantly over that in 1966. The government's ambitious development program led to a substantial budgetary deficit. New taxes totaling over $10 million were imposed, and additional problems were caused by work stoppages by public utility workers.

C. PAUL BRADLEY
Flint College, University of Michigan

ARMED TROOPS patrol the streets of Kingston to preserve order during Jamaica's national elections in February.

WIDE WORLD

BUS STOP
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JAPAN

PIX

EMPEROR AND EMPRESS pray at solemn memorial service on the 22d anniversary of Japan's capitulation in World War II (Aug. 14, 1945). Prime Minister Sato is at left.

JAPAN

Japan continued to display considerable political and economic vigor in 1967. There was a continued steady movement upward in the standard of living, and the nation advanced several notches in world economic rankings. Politically, Japan enjoyed firm guidance from Prime Minister Eisaku Sato, who was reelected and revealed impressive initiative in both domestic and foreign policy. By the close of 1967 the prime minister seemed more convinced than ever of his prospects for making Japan a "rich and robust" nation.

INTERNATIONAL AFFAIRS

Under the leadership of Sato, Japan played an increasingly active role on the world scene in 1967. This policy reflected both Sato's personal outlook and his effort to underscore the independence of Japan's foreign policy.

Relations with the United States. Like previous administrations in the postwar period, Sato's government pursued a policy of close relations with the United States. Despite vociferous attacks by his opponents, Sato reiterated his intention of strengthening cordial and beneficial relations with Washington, a policy climaxed by an 8-day visit to the United States in November. In particular, he affirmed his intention of seeking to uphold the mutual security pact and to extend its life beyond 1970 when either Japan or the United States could, with one-year's notice, effect its dissolution. Simultaneously, doubtless in response to pressure from the Johnson administration, Sato urged his countrymen, in a speech to the Diet on December 5, to assume

(*Continued on page 376*)

JAPAN • Information Highlights

Area: 142,726 square miles (369,661 sq km).
Population: 99,600,000 (April 1, 1967 est.).
Chief Cities (1965 census): Tokyo, the capital, 8,893,094; Osaka, 3,156,222; Nagoya, 1,935,430; Yokohama, 1,788,796.
Government: *Emperor*—Hirohito (acceded Dec. 25, 1926); *Prime Minister*—Eisaku Sato (took office Nov. 9, 1964). *Parliament*—(Diet), House of Representatives, 486 members (party seating, 1967: Liberal-Democratic party (LDP), 277; Japan Socialist party (JSP), 140; Democratic Socialist Party (DSP), 30; Komeito, 25; Japan Communist Party (JCP), 5; others, 9); House of Councillors, 250 members (party seating, 1966: LDP, 140; JSP, 73; Komeito, 20; DSP, 7; JCP, 4; others, 6).
Religious Faiths: Shintoism and Buddhism.
Education: *Literacy rate* (1960), 98% of population aged 15 and over. *Total school enrollment* (1964)—22,116,934 (primary, 10,030,990; secondary, 9,209,494; technical, 1,891,373; higher, 985,077).
Finance (1967 est.): *Revenues,* $13,410,133,000; *expenditures,* $14,793,079,000; *public debt* (1966), $2,071,600,000; *monetary unit,* yen (360 yen at par equal U. S.$1).
Gross National Product (1966): $97,017,272,000.
National Income (1966): $78,075,355,000; average annual income per person, $790.
Economic Indexes (1966): *Industrial production,* 292 (1958=100); *agricultural production* (1965), 132 (1956–57=100); *cost of living,* 149 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 47,784,000; cement, 38,268,000; gasoline (1965), 7,951,000; wheat flour 3,216,000; beer (1965), 2,005,800; meat, 55,100.
Crops (metric tons, 1966): rice (1967), 14,451,000; sweet potatoes and yams (1965), 4,955,000 (world rank, 1st) potatoes, 3,383,000; citrus fruit, 2,046,000.
Minerals (metric tons, 1965): Coal (1966), 51,348,000; limestone (1964), 60,603,000; iron ore (1966), 2,400,000; pyrite, 1,846,072; crude petroleum (1966), 777,600; gypsum, 750,089; silver, 9,984,879 troy ounces.
Foreign Trade (1966): *Exports,* $9,773,652,000 (chief exports, 1965): iron and steel, $1,290,480,000; transport equipment, $1,243,300,000; textile yarn and fabrics, $1,139,550,000; electrical machinery, $775,180,000); *imports,* $9,520,111,000 (chief imports, 1965: crude and partly refined petroleum, $1,047,390,000; cereals, $767,470,000; iron ore and concentrates, $523,620,000). *Chief trading partner* (1965): U. S. (took 30% of exports, supplied 28% of imports).
Transportation: *Roads* (1964), 603,718 miles (971,563 km); *motor vehicles* (1965), 6,300,020 (automobiles, 2,181,275); *railways* (1965), 12,886 miles (20,733 km); *merchant vessels* (1966), 1,406 (13,447,000 gross registered tons); *national airlines,* All Nippon Airlines, Japan Airlines; *principal airports,* Nagoya, Osaka, Tokyo.
Communications: *Telephones* (1966): 13,998,831; *television stations* (1967), 153; *television sets* (1967), 20,000,000; *radios* (1965), 20,425,000; *newspapers* (1965), 172.

THE NEW JAPAN

A Special Report on the Dramatic Reshaping of Japanese Society in the Postwar Period

On April 28, 1952, the Treaty of San Francisco, concluded between Japan and the Allied powers the previous September, went into effect. World War II in the Pacific thus formally came to a close, and the military occupation of the Japanese islands was ended. The treaty was not signed by the Soviet Union, and Japan negotiated separate agreements with India and Nationalist China. A principal result of the peace settlement was Japan's loss of its far-flung overseas empire and its confinement to the home archipelago.

Peace and Security. The security needs of Japan were a cause of deep concern. Not only were the Japanese people in no mood to assume military obligations, but they were restricted from doing so by Article 9 of their own postwar constitution. Accordingly, on the same day the peace treaty was concluded a mutual security pact with the United States was signed. This pact authorized the United States to assume major responsibilities for the defense of Japan, including the stationing of American armed forces at bases throughout and around the islands. It quickly became an irritant in Japanese political life and was renewed in 1960 only after much controversy and with many modifications.

Internal Politics. The peace treaty was supported in Japan by the several conservative parties. One of its outstanding backers was Shigeru Yoshida, who became prime minister in 1948. It was also approved by the Socialists, the strongest of the minority parties. But the issue of the security pact precipitated a split among the Socialists into right- and left-wing groups. The rupture, which reduced the effectiveness of their opposition, persisted until the fall of 1955, when it was finally healed. (A new split occurred in late 1959.) Restoration of Socialist unity, however, alarmed the conservatives, who immediately thereafter organized a coalition of their own. Known as the Liberal-Democratic party, it successfully maintained control of the government year after year.

Under the leadership of Yoshida and successive prime ministers, the government pursued a "reverse course" during the remainder of the 1950's. In effect, this policy, not always successful, sought to undo some of the objectionable reforms of the occupation period. This entailed the restoration to the national government of various powers it had formerly enjoyed, notably in police and educational matters. Although conservative gains often fell considerably short of their aims, the "reverse course" signified to many Japanese that they were once again in command of their own affairs. Still, it is noteworthy that the constitution, upon which the postwar democratic order had been constructed, was not modified in the least.

Foreign Policy. The return of peace permitted Japan to resume its place in international life. Diplomatic relations gradually were established with most governments, and participation in numerous international organizations was attained. In 1956, Japan was admitted to membership in the United Nations. That year relations with the Soviet Union were "normalized," but because of differences over the disposition of Russian-occupied islands in the north no final peace treaty was concluded. From the outset of the post-treaty era Japan maintained close relations with the United States and, in general, supported its basic foreign policy.

Industrialization and Social Progress. There was no halt in the rapid transformation of the economy, society, and culture of Japan after 1952. A revolutionary industrial system, the marvel of the world, was forged. New and sophisticated plants and mills mushroomed in the archipelago, reflecting postwar technological innovations and bringing unprecedented prosperity to Japan.

Especially noteworthy were the productive achievements in such industries as electronics, iron and steel, petrochemicals, automobiles, and plastics. In shipbuilding, Japanese yards repeatedly set new world records. Agriculture in the islands also underwent a metamorphosis. Yields per acre, notably of rice, increased each year, despite the fact that millions of farm workers were migrating from the rural areas to the constantly growing cities. A truly universal network of commerce was created as an outlet for goods turned out in increasing quantity by heavy industries. By the 1960's Japan had become one of the leading trading nations of the world.

The benefits of a continuously expanding economy were derived by millions of the Japanese people. Their standard of living, while lagging behind that of western Europe and North America, nevertheless advanced dramatically. These gains were reflected in improved diet, more comfortable home life, more educational opportunities, and unprecedented outlets for recreation and cultural expression. Simultaneously, many old customs fell by the wayside; tensions between the generations arose; and new social problems emerged. However, most Japanese appeared satisfied with their new way of life.

Within two decades after their defeat in World War II the Japanese people had sufficient cause to be proud of their progress in constructing a new state and society. Despite spectacular political demonstrations and occasional disorders, the islanders have succeeded in developing a stable, democratic system enjoying widespread support. They have also succeeded in avoiding a resurgence of militarism and involvement in war.

Yet many key problems have continued to defy solution. Most disturbing to many Japanese has been their nation's inability to achieve a political influence in international affairs commensurate with its acknowledged economic power. While the Japanese government frequently has been consulted on major issues by the great powers of the world, its viewpoints have not always carried much weight. Many observers believe that this state of affairs will not significantly change until Japan displays greater readiness to assume the responsibilities required of great-power status.

HYMAN KUBLIN

(*Continued from page 374*)

greater responsibility for their own security. (See also below, *National Security.*)

When the nuclear-powered U. S. carrier *Enterprise* visited Sasebo in January 1968, it met with large-scale political demonstrations. While Sato's government was embarrassed by this opposition, it was unwilling to take action to jeopardize the Japanese-American security system in the Pacific.

Sato refused to be badgered by domestic critics into criticism of U. S. involvement in Vietnam. In fact, during his visit to Washington, D. C., on November 14, the prime minister praised U. S. efforts to bring "peace and stability" to Asia.

A major bid was made by Sato, particularly during his Washington visit, to secure concessions on matters affecting the status of Okinawa and the Bonin Islands. He was rebuffed on the Okinawan issue but succeeded in obtaining agreement, on November 15, for the restoration of the Bonins to Japanese control in the near future.

Relations with South Korea. For the first time in the postwar period, relations between Japan and South Korea were marked by unbroken cordiality. In keeping with agreements concluded in the winter of 1966–67, Japan extended substantial financial and technical aids and credits to its erstwhile colony. This assistance, in addition to mounting Japanese private investment, helped to stimulate an unprecedented economic boom in South Korea and a sharp increase in bilateral trade. By the end of the year South Korea had emerged as one of Japan's most valuable trading partners.

Relations with China. Political and commercial relations with the Republic of China on Taiwan continued to be mutually beneficial. On the other hand, early expectations of an increase in trade with Communist China proved to be abortive. The Japanese public was shaken by the spectacles of the Cultural Revolution, and Sato's government remained cool to Communist blandishments for further trade, particularly in view of its rapidly expanding trade in many other parts of the world.

Relations with the USSR. Another year passed without the conclusion of a peace treaty between Japan and the Soviet Union, formally ending their World War II hostilities. Nevertheless, political and economic relations between the two nations continued along the rather friendly lines of the previous several years. Of pressing importance were efforts to reach mutually satisfactory agreement on development projects concerning the coal, oil, natural gas, and timber resources of Siberia. Difficulties over terms continued to evoke an impasse.

Relations With Southeast Asia. Japanese interest in development projects in Southeast Asia continued strong in 1967. Though gains in this area fell considerably short of expectations, profitable trade was carried on and investment opportunities opened up. Moreover, despite the opposition of many Japanese to the war in Vietnam, the conflict brought a number of procurement contracts to businessmen. During Prime Minister Sato's tour of 10 Southeast Asian and Pacific countries in September and October, Japan sought to advance cultural and economic relations with countries in the region. The trip included a stopover in Saigon, South Vietnam.

DOMESTIC AFFAIRS

At the beginning of 1967, Japan was immersed in a political campaign preparatory to the holding of a national election on January 29. Since nationwide elections of representatives to the lower house of the Diet had not been called for four years, the campaign was watched with close attention at home and abroad. Not only was the leadership of Prime Minister Sato, who had succeeded the ailing Hayato Ikeda in November 1964, at stake, but of paramount importance was the question of whether or not significant shifts would occur in the balance of the country's political forces. There was also a great deal of curiosity about the fate of the Komeito (Clean Government party)—which was backed by the religious and nationalistic Buddhist Soka Gakkai sect—in its first major venture at the national polls.

Elections. Sato's Liberal-Democratic Party (LDP), strained though it was by internal tensions and a series of scandals, was returned to power. Favored by the economic upswing of the preceding months and by the inept tactics of its principal opponents, Japan's conservative coalition retained its commanding grip on the lower house. Still, it was noteworthy that the LDP polled only 22,447,836 votes, or 48.8% of the total cast, a decrease of about 6% from 1963. With its 277 seats, however, it could look forward to control of the legislative chamber with no more than ordinary difficulties. (The number of seats in the House of Representatives was increased in this election from 467 to 486.)

The newly elected government took office on February 17. Like the previous cabinet, Sato's new political team reflected a somewhat uneasy balance of forces within the faction-ridden LDP. On the home front the prime minister pledged his government to eliminate corruption, promote expansion of the economy, and raise further the living standards of the people. In international affairs he promised to advance an independent foreign policy, to strive for peace, to strengthen the nation's security, and to support the controversial security pact with the United States. Impressive progress was made by Sato's administration in the pursuit of these national

HORACE BRISTOL: PIX

EISAKU SATO was reelected premier of Japan on Feb. 17, 1967, by a vote of 279 to 131 in the House of Representatives after a political crisis in December 1966 had caused him to reorganize his cabinet. While visiting Washington, D. C. in November 1967 he expressed general support for U. S. policy in Vietnam and offered his services as a peacemaker. He received U. S. assurances for the return of the Bonin Islands, captured in World War II, but was unable to obtain a change in status for the Ryukyu Islands (including Okinawa), which remain under U. S. jurisdiction.

A descendant of samurai warriors, Sato was born on March 27, 1901, in the village of Tabuse in southern Honshu. After graduating from Tokyo Imperial University in 1924 with a law degree, the future prime minister went to work for the ministry of railways. He became head of the national railway system in 1945 and was appointed vice minister of transportation in 1947. In 1948 he entered the national Diet as a Liberal-Democratic representative. Between 1951 and his election as premier on Nov. 9, 1964, he served in five cabinet posts.

WORLD PEACE

PIX

STRIKING FORMATION of the theme of the fall Soka-Gakkai games in Tokyo is "painted" across Sendagaya Stadium by massed thousands lifting cardboards on cue.

goals, and by the end of the year the prime minister was much more confident and had taken steps to shake up his cabinet. In the reorganization introduced on November 5, two thirds of the cabinet ministers were reassigned or replaced.

Opposition Parties. As a result of the January elections the Japan Socialist party (JSP) retained its position as the nation's second strongest and principal opposition party. Having anticipated substantial gains, however, the JSP was severely disappointed. It garnered 12,826,100 votes (27.9% of the total) and its number of Diet seats (lower house) declined from 141 to 140.

The JSP experienced continued internal crisis during 1967. Struggles persisted among four main factions, which were polarized on issues of leadership and policy. Younger members revolted against the party chairman, leftist Kozo Sasaki, for his pro-Peking position and his rigid Marxism. This opposition led to Sasaki's resignation on August 6. Although Sasaki's principal rival, Saburo Eda, was blocked from being elected chairman, and a compromise moderate candidate, Seiichi Katsumata, was chosen (on August 20), the party remained torn. It seemed clear that fundamental conflicts would have to be resolved before there could be an upsurge in the national popularity of the JSP.

The Democratic-Socialist party, more moderate than the JSP, failed to catch fire in the national elections. Yet it did have some cause for satisfaction. Increasing its popular vote to 3,406,463, or 7.4% of the popular vote, it added 7 seats to the 23 it had held in the previous House of Representatives.

The infant Komeito first captured national attention in 1965 as a result of its signal gains in the House of Councillors of the Diet—where it is the third-strongest party—and in the Tokyo Metropolitan Assembly elections. In the national contest in January 1967, the party put forward only 32 candidates in carefully selected districts. By winning 25 seats, with a total of 2,477,371 votes, or 5.4% of the votes counted, it firmly established a place for itself in Japanese national life. Many observers, however, speculated that, barring drastic economic setbacks within the country, the Komeito, which draws much of its backing from workers and small shopkeepers in the large cities, has only limited potentiality for further electoral advances.

The Japan Communist party (PCP) increased its popular vote appreciably in the 1967 national elections. Nevertheless, with a total of 2,190,563 votes, or 4.8% of votes cast, it won only 5 seats in the lower house. This represented a gain of one seat over the preelection number. The party continued to be torn from within in 1967, among other matters, over the issues posed by the Sino-Soviet split.

National Security. Issues of national defense and security continued to agitate the Japanese public in 1967. Much of the controversy revolves around the Japanese Constitution of 1946, which prohibits Japan from maintaining "war potential" forces. Only a small number of troops are maintained by the nation as "self-defense" forces. The United States has urged the country to take stronger measures, especially since the Korean conflict. As earlier, in 1967 the battle raged between Prime Minister Sato, cabinet officials, and leaders of the armed forces, who urged more vigorous action to provide for security needs, and the opposition political parties and intellectuals, who pointed to constitutional barriers and stressed the absence of a need for stronger measures.

The Japanese Self-Defense Forces, a large part of which remained stationed in Hokkaido on watch against Soviet forces in Sakhalin and the Kuriles, continued to fall under authorized strength, numbering about 225,000 men. Difficulties in recruiting manpower for military service were aggravated by the more attractive employment opportunities available elsewhere in the flourishing economy. As a result, recruitment costs continued high. As in earlier years, the United States stationed military forces (about 37,000 men) in the islands to assist in defense. Discussion about the problems and prospects of extending the U. S.-Japan mutual security pact beyond 1970 was a familiar theme through the year.

A goodwill visit of four Japanese destroyers to the United States from July through October marked the first such visit since 1936.

Economic Developments. Despite trouble spots, the Japanese economy remained healthy in 1967. The many problems that plagued the nation were essen-

UPI

TOKYO RIOTERS, bent on preventing Prime Minister Sato's departure for a visit to South Vietnam, try unsuccessfully to breach police lines blocking approaches to Tokyo International Airport on October 8. Here, police vehicles burn on a bridge.

tially those characteristic of other complex economies in a rapidly changing world. Economic forecasters anticipated a leveling off in many areas of the economy but also looked toward the future with considerable optimism. Predicting a steady advance in the nation's standard of living—the per capita income in 1967 was $903—they were able to see a point not too distant in time when "creature comforts" would become commonplace.

The gross national product (GNP) in 1967 soared to $114 billion—exceeded only by the United States and West Germany—and confidence was expressed that Japan would advance to second place in 1968 with a GNP estimated at $138 billion. The 1967 high was made possible by the rise in output of such well-established industries as shipbuilding, electronics, petrochemicals, and iron and steel; by an upsurge of mining production; and by spectacular progress in automotive manufacturing. In 1967 production by Japanese companies, which turned out 2,800,000 car and truck units, was third in world ranking. Automotive exports numbered 342,425 vehicles. It is anticipated that in 1968 Japan's production will surpass 3,000,000 units, exceeding every other country except the United States. In 1967 rice production rose 13% over the previous year to a record high of 14,451,000 tons.

As customary, the Japanese government kept a close watch on its international balance of payments. Because of a sharp rise in imports and a large deficit in the invisible trade balance (current transactions) Japan's overall balance of international payments in 1967 registered a decline of $570 million, the second largest in its history. Foreign exchange reserves amounted to slightly over $2 billion at the end of the year.

Other Developments. Shigeru Yoshida, Japan's celebrated elder statesman of the postwar era, died on October 20 at the age of 89. Long a career diplomat, he served as prime minister for seven years after World War II, including a continuous tenure from October 1948 to December 1954, one of the longest in modern Japanese history. Noted for his conclusion of the peace treaty with the Allied powers in 1952, Yoshida was also credited with a major role in building Japan into a democratic state. His state funeral was attended by dignitaries from all over the world.

On December 1, despite strong opposition, the long-delayed demolition of Tokyo's famed Imperial Hotel was started. Designed by Frank Lloyd Wright, the architecturally controversial building, across the avenue from the old Imperial Palace, was opened in 1923. Withstanding the shocks of the memorable earthquake immediately thereafter, the Imperial Hotel became one of Japan's most famous landmarks in the following decades. Proposals have been made for moving portions of the building to other areas, for preservation as an historical monument. Meanwhile, plans are going forward for construction of a 17-story hotel on the site.

During the summer of 1967, Japan's population crept past the 100 million mark. Its population is now exceeded by only six other countries.

HYMAN KUBLIN
Brooklyn College, City University of New York

JAZZ. See RECORDINGS.

JEHOVAH'S WITNESSES

This society of Christian ministers carried on its activities in nearly 200 countries during 1967. More than 25,000 congregations were operating under the direction of 96 branch offices, and during the year nearly 75,000 new members (ministers) were baptized, bringing total membership to 1,160,604.

A series of "disciple-making" assemblies was held in 140 cities in the United States, Canada, the British Isles, and northern Europe. More than 775,000 persons at these assemblies heard the talk "Rescuing a Great Crowd of Mankind Out of Armageddon." The new Bible study aid *Did Man Get Here by Evolution or by Creation?* was released. Additional assemblies of the same series were scheduled for Central and South America.

The Jehovah's Witnesses' Brooklyn printing plant produced more than 8 million bound books and 150 million magazines in 1967. Since the great demand for Bibles and Bible literature could not be met by existing facilities, a new 10-story printery and bindery was completed during the year, enlarging the Brooklyn facilities to a four-building complex.

Opposition to the work of Jehovah's Witnesses continued in eastern Europe, Spain, Portugal, several Arab countries, and some of the Caribbean Islands, but the society's activities in these countries persisted. Circulation of *The Watchtower*, Jehovah's Witnesses' official journal, increased to 5 million in 74 languages, and its companion, *Awake!*, attained a circulation of 4,650,000 in 26 languages.

N. H. KNORR
Watchtower Bible & Tract Society

JOB CORPS. See ANTI-POVERTY PROGRAM.

JOHNSON, Lyndon Baines

Thirty-sixth president of the United States: b. near Johnson City, Texas, Aug. 27, 1908.

For President Johnson, the year 1967 was one of deepening troubles. The two great problems that have plagued his administration—Vietnam and racial unrest—both worsened during the year. The chief executive came under increasing attacks from members of both political parties, and polls showed public confidence in him to have declined.

The Great Society. Johnson's domestic proposals reflected his awareness of new limits upon his power. While he continued to endorse his Great Society programs and to insist that the country could afford both the war in Asia and these efforts at home, he conceded in his State of the Union message, January 10, that demands on the nation's resources were heavy. "I wish . . . that we could do all that should be done," he said.

The mood of Congress as well as the war placed limits upon him. As the year progressed, congressmen—Southern Democrats as well as Republicans—demonstrated a determination and an ability to cut appropriations below his requests in crucial areas, such as the war on poverty. He had to battle merely to preserve and fund established programs and, while not neglecting the Democratic members of the conservative coalition, he lashed out at his Republican foes, charging (as Harry Truman had in 1948) that they were obstructionists. On one occasion he labeled them "wooden soldiers of the status quo."

Johnson's reaction to the rioting in many urban centers during the summer indicated that he felt seriously restricted by his political situation. He admitted that the riots revealed that not enough was being done to solve the social and economic problems in the cities, and he insisted that suppression, while necessary, was not enough. But he did not call for bold new programs nor for substantial enlargement of established ones. He merely called for enactment of proposals made earlier, and he also tried to press business leaders into a significant attack on the problems of the urban poor.

In response to the most serious of the riots, that in Detroit, he ordered federal troops to the city at Gov. George Romney's request, and he created a special Advisory Commission on Civil Disorders to look into the causes of urban unrest.

Vietnam. The war occupied the top spot on Johnson's agenda in 1967. He was discouraged about prospects for a negotiated settlement and seemed resigned to a long struggle. The other side did not seem ready to accept terms that were acceptable to Johnson.

The military chiefs and other advocates of reliance on military pressure became Johnson's most influential advisers on Vietnamese matters. He rejected suggestions that bombing of North Vietnam should be stopped in order to encourage Hanoi to come to the bargaining table. He believed that bombing was effective and that another pause in it would harm efforts in South Vietnam by allowing infiltration to continue unmolested. To fight the war, he called for substantial rises in appropriations, and he increased both the number of U. S. troops involved in the war and the number of targets in North Vietnam open to U. S. bombers. Before the end of the year, the troop level was close to 500,000, planes were attacking within a few miles of the Chinese border, and President Johnson was confident that military and political progress was taking place.

UPI

PRESIDENTIAL VISIT to the carrier *Enterprise* in November was an occasion for special flight maneuvers, witnessed by Johnson (*center*) and Secretary McNamara (*right*).

Johnson frequently outlined his suggestions for ending the war. He made several peace probes and insisted that he was eager to negotiate and would stop the bombing when conditions were right. Opponents of his policies argued, however, that his definition of the conditions was unclear. In an important policy statement, delivered at San Antonio on September 29, the President declared that the United States would stop the bombing of the North "when this will lead promptly to productive discussion." While he suggested negotiations between Saigon and the National Liberation Front and the establishment of a coalition government in South Vietnam, the clarification of this suggestion issued by Johnson and President Nguyen Van Thieu after their meeting in Canberra, Australia, on December 21 indicated that they were not ready to recognize the NLF as an independent and legitimate political party.

Johnson continued to compare the war in Vietnam with earlier U. S. opposition to Germany, the USSR, and North Korea, and to deny that he had intervened in a civil war. As he viewed it, the war was being fought to resist Communist aggression, to demonstrate that aggression was no longer an acceptable means of promoting political change, and to prevent a larger war.

(See also VIETNAM WAR.)

Criticism. Criticism of the President and his policies ranged from emotional demonstrations to reasoned analyses, and from demands that the Air Force be allowed greater freedom in the selection of targets to proposals for withdrawal from Vietnam.

UPI

THE FIRST FAMILY

President and Mrs. Johnson acquired a grandson and a second son-in-law in 1967. On June 21 Luci Johnson Nugent gave birth to Patrick Lyndon Nugent, shown (*above*) with his rapt grandfather aboard the presidential plane on October 30, and (*below*) with the President and the Nugents on August 1. Lynda, the President's other daughter, became the wife of Marine Capt. Charles Robb on December 9 in a White House ceremony, followed by the reception at which the newlyweds and the Johnsons are shown.

UPI

UPI

PRESIDENTIAL HANDSHAKE of de Gaulle of France (*left*) and Johnson was prompted by West German President Lübke (*center*) after state funeral of Konrad Adenauer at Cologne, April 25.

PIX

Many critics advocated a scaling down of military operations and sincere efforts at negotiations, and they charged that Johnson frequently failed to tell the truth. They continued to speak of a "credibility gap."

Much of the criticism came from members of Johnson's own party. The Democratic coalition, in fact, seemed to be disintegrating. Most of organized labor remained behind the President, but the Southern wing was divided and unhappy. George Wallace, former governor of Alabama, spoke for some Southerners (and some Northerners and Westerners) who disliked Johnson's welfare and civil rights programs and believed that the enemy in Vietnam—as well as demonstrators, dissenters, and rioters at home—should be dealt with more forcefully. And many members of a small but articulate element in the coalition, the so-called intellectuals, were very discontented.

Many liberal Democrats hoped that Johnson would not be on the ticket in 1968 and looked about for an alternative to him. Sen. Robert Kennedy of New York appeared to be the most likely candidate. He seemed alert to domestic problems as well as hostile to Vietnam policies and was, according to the pollsters, very popular. Kennedy, however, announced that he would support Johnson. Thus some of the discontented Democrats rallied behind Sen. Eugene McCarthy of Minnesota after he announced on November 30 that he would run against the leader of his party. McCarthy hoped to promote responsible political action and force a change in Asian politics. Both McCarthy and Kennedy denied Johnson's charge that they were working together against him.

Johnson's Responses. While the President sought consolation in the fact that other presidents now recognized as great had been criticized harshly, he did not wait patiently for the verdict of history. He made strenuous efforts to convert or weaken his critics, meeting with some of them and denouncing others. He suggested that criticism of the war harmed the nation and its fighting men by encouraging the enemy to persist in hope of obtaining a satisfactory settlement, and he insisted that the dissenters represented only a small part of the population. He condemned the methods employed by the demonstrators that forced the administration to take extraordinary security measures to protect him. He also drew heavily upon the prestige of his top military commander in Vietnam, Gen. William Westmoreland, who returned home twice and spoke optimistically of the war effort to Congress and other groups.

Johnson also made dramatic trips outside the United States. On March 20–21 he journeyed to Guam for a meeting on the war with his top advisers and the South Vietnamese leaders. He met in Punta del Este, Uruguay, April 12–14, with chiefs of 18 other American nations. And on April 25 he went to West Germany for the funeral of former West German Chancellor Konrad Adenauer in Cologne and for a chance to talk with European leaders. He flew to Australia for memorial services on December 22 for Prime Minister Harold Holt, and then journeyed the rest of the way around the world, visiting U. S. troops in South Vietnam and Thailand and meeting with Pope Paul VI in Rome.

Popularity. Johnson's behavior during the crisis in the Middle East in early June strengthened his popularity temporarily. He acted in a restrained fashion when Egypt threatened Israel and the latter retaliated, and then he moved on to a summit meeting with Premier Aleksei N. Kosygin of the Soviet Union. Meeting in Glassboro, N. J., on June 23 and 25, the two men discussed a wide range of topics. Approval of Johnson's handling of his job, which had been hovering slightly below 50%, shot up to 58% in late June, reaching its highest point in a year.

The benefits of Johnson's behavior in June were not long lasting. He suffered from the riots that erupted in July, his proposal for an income tax surcharge, his decision to send more troops to Vietnam, the discouraging course of the war, and disillusionment following the conference with Kosygin. At the end of August, polls showed public approval dropping to 39%—a new low for him or any president since 1952. Some recovery in his standing took place late in the year as he stepped up his campaign against his critics. But he returned only to the level to which he had fallen by the beginning of 1967, and his political future remained as uncertain as it had been then.

Family. As a relief from the burdens of state, President Johnson's family life was marked by two special events in 1967. On June 21 his younger daughter, Luci (Mrs. Patrick Nugent), gave birth to a son, Patrick Lyndon Nugent. And on December 9 his daughter Lynda Bird was married to Marine Capt. Charles S. Robb in a White House ceremony.

(See also UNITED STATES.)

RICHARD S. KIRKENDALL
University of Missouri

UPI

AN ISRAELI soldier sits by his foxhole overlooking the Jordan River while on guard duty near Damiya, a village in the region of Jordan now occupied by Israel.

JORDAN

The Israeli-Arab war overshadowed other events in Jordan in 1967. In the first three days of that conflict, June 5–7, Jordan lost to Israeli forces all its territory west of the Jordan River, including the Old City of Jerusalem. The refugee problem, festering since 1948, was intensified by the arrival of more displaced persons, fleeing from the Israeli-occupied sectors. At the end of the year, Jordan faced economic dislocation and an uncertain future.

Internal Politics. At the beginning of 1967, Jordan was governed by an interim cabinet headed by Prime Minister Wasfi al-Tal, whose mandate was to conduct elections for a new parliament. On March 4, the Tal government gave way to a purely caretaker cabinet led by Sharif Hussein ibn Nasser. Elections were held on April 15. Political parties had been outlawed, and all candidates had been carefully screened for loyalty to the royal regime.

On April 23, King Hussein named Saad Jumaa prime minister. Following the Israeli-Arab war, Jumaa offered his resignation so that a new government might deal with the national crisis. On October 7, Bahjat al-Talhouni, reputedly more favorably inclined toward close relations with the United Arab Republic, replaced Jumaa as prime minister. The king, however, continued to dominate the government.

Foreign Relations. Early in 1967, Jordan was under propaganda attack by the UAR and Syria as reactionary, subservient to "Western imperialism," and insufficiently concerned with protecting the rights of the Palestine Arabs. On February 23, the government recalled its ambassador from Cairo to protest the UAR's attitude, and on May 23 it expelled the Syrian ambassador and recalled its own envoy.

Meanwhile, tensions between Syria and the UAR on the one hand and Israel on the other were building toward war. Under these circumstances, a common Arab nationalism and common opposition to Israel overcame inter-Arab antagonisms. On May 24, Jordan announced that it would accept the stationing of Saudi Arabian and Iraqi troops on its territory, and on May 30, Hussein signed a mutual defense pact with the UAR, placing Jordanian forces under Egyptian command.

The Israeli-Arab War. When large-scale hostilities between Israel and the UAR began on June 5, Jordan joined in the conflict. By the end of the second day of fighting, Arab air power was virtually destroyed, and Jordanian ground forces were suffering serious reverses. On June 7, Jordan became the first of the Arab states to accept the cease-fire demanded by the UN Security Council. When the agreement went into effect, Israeli troops held 2,165 square miles (5,605 sq km) of Jordanian territory with a population of over 650,000. Refugees, ultimately to number over 200,000, were flooding into what remained of the Jordanian state. Though Jordan joined in Arab charges that the United States and Britain had assisted Israel in the war (charges that Hussein later retracted), it did not break diplomatic relations with either country.

The Aftermath. Before the UN Security Council and in the special session of the General Assembly that met between June 17 and July 21, Jordan sup-

UPI

KING HUSSEIN of Jordan, who concluded a mutual defense pact with the United Arab Republic on May 30, 1967, declared war on Israel on June 5, but was compelled to admit defeat three days later. In the weeks that followed the conflict he called for a general political solution for the Middle East, and while demanding the condemnation of Israel by the United Nations, he appealed to Arab leaders to adopt a realistic policy and accept their defeat as "a turning point for the better." During a visit to the United States in November, he indicated that the Arab nations might concede Israel's right to exist if Israel agreed to withdraw from conquered territory.

Hussein, who is said to be a direct descendant of the prophet Mohammed, was born on Nov. 14, 1935. Educated at a Muslim college in Amman and at Victoria College in Alexandria, Egypt, he also attended Harrow School and Sandhurst military academy in England. He was a favorite of his grandfather, King Abdullah, who was assassinated in 1951. Hussein succeeded his father, King Talal, on Aug. 11, 1952, and he was enthroned on his 18th birthday.

JORDAN • Information Highlights

EUROPE
ASIA
AFRICA

Area: 37,737 square miles (97,740 sq km).
Population: 2,040,000 (mid-1966 UN est.).
Chief Cities (1961 census): Amman (1966 est.), the capital, 330,000; Ez Zarqa, 96,080; Jerusalem (old city), 60,488.
Government: *King*—Hussein (acceded Aug. 11, 1952); *Prime Minister*—Bahjat al-Talhouni (took office Oct. 7, 1967). *Parliament*—Council of Representatives, 60 members; Council of Notables, 30 members.
Religious Faith: Muslims, 94% of population.
Education: *Literacy rate* (1961), 32% of population aged 15 and over. *Total school enrollment* (1964)—371,965 (primary, 275,117; secondary, 92,915; teacher-training, 196; technical, 2,410; higher, 1,267).
Finance (1966 est.): *Revenues*, $65,100,000; *expenditures*, $145,910,800; *monetary unit*, dinar (.3571 dinars=U. S.$1).
Gross National Product (1966 est.): $469,000,000.
Manufacturing (metric tons, 1965): Cement (1966), 374,400; wheat flour, 101,000; gasoline, 61,000.
Crops (metric tons, 1964–65): Tomatoes, 228,000; wheat (1966), 101,000; olives, 98,000; lentils, 25,000.
Minerals (metric tons, 1965): Phosphate rock, 858,000; salt, 19,954; marble, 2,000 square meters.
Foreign Trade (1966): *Exports*, $34,972,000 (chief exports, 1965: natural phosphates, $6,804,000; fresh fruit and nuts, $2,934,400; tomatoes, $2,324,000); *imports*, $184,128,000 (chief imports, 1965: textile yarn and fabrics, $18,928,000; nonelectrical machinery, $12,460,000). *Chief trading partners* (1965): U. S. (took .03% of exports, supplied 15% of imports); Britain (took .02% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 3,479 miles (5,599 km); *motor vehicles* (1965), 26,952 (automobiles, 17,164); *railways* (1965), 227 miles (365 km); *national airline*, Jordan Airways; *principal airports*, Amman, Jerusalem.
Communications: *Telephones* (1966 est.): 26,000; *radios* (1965), 269,000; *newspapers* (1965), 7.

ported unsuccessful Arab and Soviet efforts to have Israel branded an aggressor and to force Israeli withdrawal from all occupied territory. Like the other Arab belligerents, Jordan rejected Israel's demands for recognition and direct peace negotiations. In early November, during a visit to the United States, King Hussein maintained that the Arab position was both realistic and flexible. Arab raids into Israeli-held territory and armed clashes across the cease-fire line, however, marked the uneasy peace. By the end of 1967 the postwar stalemate was unresolved.

Economic Conditions. The Jordanian economy was struck a staggering blow by the June war. Israel's occupation of the west bank of the Jordan River resulted in the loss of more than half of Jordan's agricultural production, a large part of its industrial output, and its main tourist attractions. The 7-year development plan (1964–70), aimed at making Jordan economically self-sufficient at the beginning of the 1970's, was thrown into disarray.

The country escaped economic collapse only through the continuation of U. S. and British aid and through emergency financial assistance from oil-rich Kuwait, Saudi Arabia, and Libya. On October 3 and 4, Hussein conferred in Moscow with Soviet leaders, who reportedly offered economic and military support. No agreements were announced, however, and Jordan maintained its ties with the West.

PAUL L. HANNA
University of Florida

JUDAISM. See RELIGION—*Judaism*.
JUVENILE DELINQUENCY. See CHILD WELFARE; CRIME.

KANSAS

The capital city's recovery from the devastating tornado of 1966 and increased crop production highlighted the year 1967 in Kansas.

Recovery from Storm. Most of the damage caused by the June 1966 tornado that hit Topeka, resulting in about $100 million property loss, was effectively erased during 1967. New and renovated buildings rose over the tornado strip. New streets were cut through some segments of the devastated area. Washburn University, which received the greatest damage to a single institution, held many of its classes in portable buildings, but new, permanent structures were being erected. The legislature authorized purchase of six tornado-damaged blocks south of the state capitol for expansion of government buildings.

Crop Production. Beginning in the spring of 1967, abundant rains fell in most sections of Kansas and

KANSAS • Information Highlights

Area: 82,264 square miles (213,064 sq km).
Population: 2,275,000 (July 1, 1967 est.).
Chief Cities (Jan. 1, 1967, est.): Topeka, the capital, 120,467; Wichita, 281,110; Kansas City, 169,750; Overland Park, 65,890; Hutchinson, 40,081; Salina, 38,024, Lawrence, 30,901; Prairie Village, 32,277.
Government: *Chief Officers*—governor, Robert B. Docking (Democrat); lt. gov., John Crutcher (Republican); secy. of state, Mrs. Elwill M. Shanahan (R); atty. gen., Robert C. Londerholm (R); treas., Walter H. Peery; supt. of pub. instr., W. C. Kampschroeder; chief justice, Robert T. Price. *Legislature*—(met Jan. 10, 1967): Senate, 40 members (27 Republicans, 13 Democrats); House of Representatives, 125 members (77 R, 48 D).
Education: *School enrollment* (1965–66)—public elementary, 400,000 pupils (13,029 teachers); public secondary, 153,000 pupils (10,491 teachers); nonpublic schools, 57,900 pupils (2,150 teachers); college and university (fall 1965), 81,574 students. *Public school expenditures* (1965–66)—$238,000,000 ($495 per pupil); average teacher's salary, $5,785.
Public Finance (fiscal year 1967): *Revenues*, $589,911,885 (3% sales tax, $118,129,493; motor fuel tax, $51,898,381; federal funds, $139,624,383). *Expenditures*, $558,041,984 (education, $255,613,664; health, welfare, and safety, $123,248,497; highways, $127,222,815).
Personal Income (1966): $6,511,000,000; average annual income per person, $2,862.
Public Assistance (fiscal year 1967): $63,136,531 to 73,867 recipients (aged, $20,852,113; dependent children, $21,421,157).
Labor Force (employed persons, annual 1966): *Agricultural*, 92,200; *nonagricultural* (wage and salary earners), 721,100 (19% manufacturing, 20% trade, 19% government). *Unemployed persons* (annual 1966)—22,600.
Manufacturing (1963): Value added by manufacture, $1,460,374,000 (transportation equipment, $446,673,000; chemicals and allied products, $179,704,000; nonelectrical machinery, $97,032,000; petroleum and coal products, $115,621,000; fabricated metals, $63,114,000; food and products, $239,000,000).
Agriculture (1966): *Cash farm income*, $1,758,639,000 (livestock, $976,512,000; crops, $556,486,000; govt. payments, $255,641,000). *Chief crops* (tons)—wheat, 6,002,100 (ranks 1st among the states); sorghum grain, 3,908,828 (rank, 3d); hay, 4,077,000; corn for grain, 1,671,096; soybeans, 577,696; sugar beets, 342,000; barley, 109,200; oats, 96,320; rye, 23,940.
Mining (1966 est.): *Production value*, $571,465,000. *Chief minerals* (tons)—stone, 13,924,000; sand and gravel, 12,300,000; coal, 1,300,000; salt, 983,000; clays, 742,000; crude petroleum, 104,390,000 barrels.
Fisheries (1965): *Commercial catch*, 42,000 pounds ($12,000).
Transportation: *Roads* (Dec. 1966), 133,296 miles (214,473 km); *motor vehicles* (1967), 1,523,568; *railroads* (1965), 12,056 track miles (19,402 km); *airports with scheduled services* (1967), 12.
Communications (1967): *Telephones* 1,088,200; *television stations*, 12; *radio stations*, 83; *newspapers*, 53 (daily circulation, 674,952).

brought excellent yields per acre and above-average production for most crops. About 222 million bushels of wheat were harvested, a decrease of 1 million bushels over the 1961–65 average. Sugar beet production set a record. Crops of sorghum grain, soybeans, and hay were each the second largest in Kansas history.

Legislation. Gov. Robert Docking signed 488 of the more than 500 bills passed by the 1967 state legislature. A record budget of $619.6 million was approved for the 1968 fiscal year. Bills included measures to increase state aid to elementary and secondary schools to $92.5 million and to implement the Title 19 (Medicaid) program, an extension of the federal Medicare plan. The state tax on the first $2,000 of taxable income was reduced from 2½% to 2%. The Kansas Commission on Civil Rights was given power to initiate complaints and issue subpoenas when employment discrimination in specific areas was suspected.

The legislature authorized the issuance of $120 million in bonds to build a tollway from Kansas City to Galena, but state highway funds were not pledged against the bonds. Provision was made for a study of the feasibility of a turnpike to connect southern Johnson, Wyandotte, and Leavenworth counties with Kansas City's new International Airport.

Since general legislation will now be considered at all annual sessions of the Kansas legislature, certain legislative committees have been authorized to meet between sessions, and bills from the first general session can be held for consideration by the second.

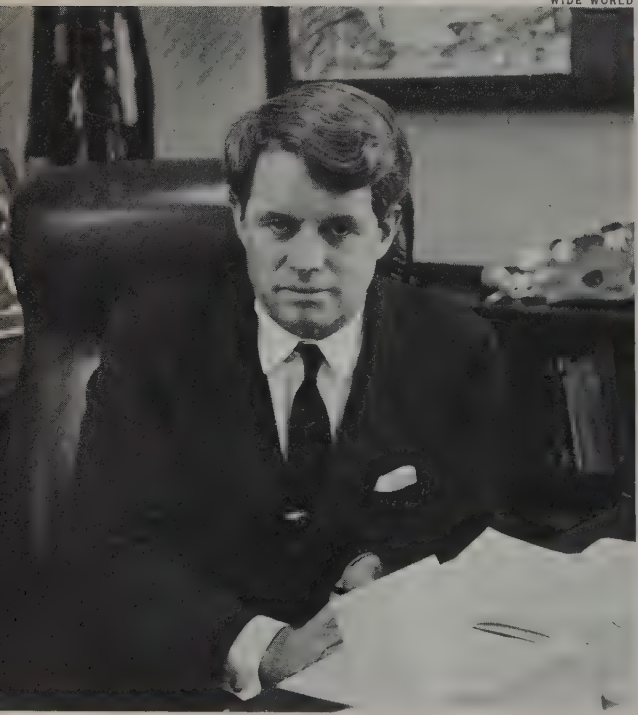
Racial Disorders. Nineteen persons were arrested in Wichita on July 31 during a night of fire-bombing and rock-throwing by Negroes. Violence erupted again on August 3–5, when both whites and Negroes fired into gathered crowds.

New State Historical Museums. The Pawnee Indian Village Museum opened near Belleville at the end of 1967. The circular structure was built around an over a Pawnee lodge site. Remains of the lodge wer excavated and the archaeological objects were left i the new museum exactly as they were abandone 150 years ago. Another museum was established jus south of Hays at Fort Hays (1865–89). Exhibit were placed in the renovated guard- and block houses. Both museums are the result of efforts b the state to upgrade some of its historic sites throug the State Historical Society.

Miss America. Debra Dene Barnes of Morgan Kans., was chosen as Miss America for 1968 on Sep tember 9. She is the second Kansas girl so honored

NYLE H. MILLE
Kansas State Historical Societ

WIDE WORLD



SEN. ROBERT F. KENNEDY, an outspoken critic of U. policy in Vietnam, is shown in his office in Washington, D.C

KENNEDY, Robert Francis

U. S. Senator from New York: b. Brookline Mass., Nov. 20, 1925.

Robert Kennedy became a leading spokesma in 1967 for those opposed to continued escalation o the war in Vietnam. Kennedy, who has been a U. S senator representing New York since 1964, was frequently mentioned as a possible candidate for th 1968 presidential nomination of the Democrati party. However, he repeatedly denied any intentio of running for the presidency in 1968.

Political Views. Although opposed to the unilatera withdrawal of U. S. troops from South Vietnam Kennedy has been an outspoken critic of the administration's conduct of the war. In 1967 he becam increasingly critical of President Johnson's handlin of the conflict. On March 2, Kennedy made a Senat speech calling for a halt to the bombing of Nort Vietnam in anticipation of negotiations, and in August he opposed the increase in the number o bombing targets. He charged in November tha during the previous winter the administration ha passed up a chance for negotiations in the hope o attaining a military victory.

Kennedy introduced bills in the Senate in 196 to encourage private investment in housing, jo training, and industrial development in poverty area through the granting of tax credits. He advocate a 50% increase in Social Security payments in February, but in August he said that the increase woul have to be reduced to 20%.

Background. The Kennedy family boasts a stron political tradition. Robert's elder brother John wa the 35th president of the United States, and hi younger brother, Edward (Ted), is a senator fro Massachusetts. His father, Joseph P. Kennedy, wa ambassador to Britain from 1938 to 1941, and bot his grandfathers were active in Massachusetts politic

Robert Kennedy served in the U. S. Navy fro 1944 to 1946. He graduated from Harvard University in 1948 and from the University of Virginia La School in 1951. He married Ethel Skakel on Jun 17, 1950. Their 10th child was born on March 2 1967.

Early Career. After receiving his law degree, Kennedy served as an attorney in the Justice Department's Criminal Division. He was named counsel t the Hoover Commission in 1953 and served as counsel to various Senate committees in 1953–5

During the eventful years leading to President Kennedy's assassination in November 1963, Robert was his brother's campaign manager, confidant, and closest adviser. He was attorney general from 1961 until September 1964. Under his direction, the Department of Justice accelerated the prosecution of voting-rights and school-desegregation cases and persuaded the Interstate Commerce Commission to strengthen its regulations banning segregation in bus terminals and on interstate buses.

Senator. Amid cries of "carpetbagger," Kennedy ran against New York's incumbent senator Kenneth Keating in 1964 and was elected by a margin of 719,693 votes. According to the *Congressional Quarterly's* analysis of voting, Kennedy's votes in the Senate have been predominantly "liberal." He took a prominent part in debates on the anti-poverty program (favoring more funds), and has supported Medicare, home rule for the District of Columbia, and the "one man, one vote" legislative apportionment decisions of the Supreme Court.

NICK THIMMESCH
Washington Bureau Chief, "Newsday"
Co-author, "Robert Kennedy at 40"

KENNEDY ROUND. See INTERNATIONAL TRADE—*Tariffs.*

KENTUCKY

Few years in 20th century Kentucky history have produced so much excitement and controversy as 1967. In the general election on November 7, Kentuckians produced a weird voting pattern that made Louie B. Nunn the first Republican to be elected governor in 20 years. Nunn was inaugurated on December 12, succeeding Gov. Edward T. Breathitt, Jr., who was constitutionally ineligible to succeed himself.

Elections. The primary election on May 23 saw both Democrats and Republicans deeply involved in the nomination of candidates for the elective state offices. Henry Ward, former state commissioner of highways, easily gained the Democratic nomination over his nine opponents. Nunn, a conservative lawyer, won the Republican nomination, barely defeating his moderate opponent, Marlow W. Cook, county judge of populous Jefferson county.

Although a Republican won the governorship in November, the Democrats elected the lieutenant governor, attorney general, superintendent of public instruction, and treasurer. They also retained control of both houses of the Assembly.

Open Housing. One of the first major events of the year was the general protest in Louisville, in April, over open housing. Negro leaders, including the Rev. Martin Luther King, Jr., threatened to halt the running of the Kentucky Derby (on May 6) by staging a sit-down on the track at Churchill Downs and by blocking incoming transportation facilities. Neither of these threats was carried out, but Negroes sought to march in protest against official attitudes, and there were some open street disturbances. In December the Louisville Board of Aldermen passed an open housing ordinance.

Strip Mining. In late June and July small landholders in eastern Kentucky, encouraged by conservation-minded Governor Breathitt, resisted with some success the spoliation of their farms and homes by strip mining operations. Jink Ray, a Pike county farmer, served a brief term in jail for contempt of court when he undertook to halt mining operations. Governor Breathitt, in his last act before leaving office, signed on December 11 an order strictly regulating strip mining on mountain slopes.

KENTUCKY • Information Highlights

Area: 40,395 square miles (104,623 sq km).
Population: 3,191,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Frankfort, the capital, 20,800; Louisville, 392,000; Lexington, 79,000; Covington, 57,000; Owensboro, 45,800; Paducah, 34,000; Bowling Green, 32,800; Ashland, 31,000.
Government: *Chief Officers*—governor, Louie B. Nunn (Republican); lt. gov., Wendell H. Ford (Democrat); secy. of state, Elmer Begley (R); atty. gen., John B. Breckinridge (D); treas., Thelma L. Stovall; supt. of pub. instr., Wendell P. Butler; chief justice, Squire N. Williams, Jr. *Legislature*—General Assembly (no regular session in odd-numbered years): Senate, 38 members (14 Republicans, 23 Democrats, 1 vacancy); House of Representatives, 100 members (43 R, 57 D).
Education: *School enrollment* (1965–66)—public elementary, 468,500 pupils (16,620 teachers); public secondary, 235,000 pupils (9,750 teachers); nonpublic schools, 100,800 pupils (3,710 teachers); college and university (fall 1965), 76,440 students. *Public school expenditures* (1965–66)—230,000,000 ($364 per pupil); average teacher's salary, $4,930.
Public Finance (fiscal year 1966): *Revenues,* $979,079,572 (3% sales tax, $154,683,765; motor fuel tax, $81,588,726; federal funds, $214,120,280). *Expenditures,* $825,171,000. State debt, $556,501,376 (June 30, 1966).
Personal Income (1966): $7,143,000,000; average annual income per person, $2,246.
Public Assistance (fiscal year 1967): $105,706,786 to 179,860 recipients (aged, $53,285,498; dependent children, $36,142,484).
Labor Force (employed persons, July 1967): *Agricultural,* 143,200; *nonagricultural* (wage and salary earners), 956,300 (23% manufacturing, 17.9% trade, 14.8% government). *Unemployed persons* (July 1967)—49,600.
Manufacturing (1965): Value added by manufacture, $3,135,372,000 (transportation equipment, $277,351,000; primary metals, $176,890,000; nonelectrical machinery, $340,095,000; electrical machinery, $441,544,000; fabricated metals, $169,504,000; food and products, $484,688,000).
Agriculture (1966): *Cash farm income,* $754,159,000 (livestock, $383,868,000; crops, $327,387,000; govt. payments, $42,904,000). *Chief crops* (tons)—tobacco, 204,859 (ranks 2d among the states); hay, 2,723,000; corn for grain, 1,820,504; soybeans, 217,000; wheat, 173,400; barley, 44,280.
Mining: *Production value* (1966), $498,364,000. *Chief minerals* (tons)—bituminous coal, 93,000,000; clays, 1,152,000; crude petroleum, 18,066,318 barrels; natural gas, 76,536,000,000 cubic feet.
Fisheries (1965): *Commercial catch,* 2,119,000 pounds ($232,000).
Transportation: *Roads* (Dec. 1966), 69,839 miles (112,387 km); *motor vehicles* (1966), 1,603,037; *railroads* (1967), 3,503 main-line miles (5,637 km); *airports with scheduled services* (1967), 7.
Communications: *Telephones* (1966), 1,078,300; *television stations* (1967), 7; *radio stations* (1967), 96; *newspapers* (1966), 34 (daily circulation, 1,180,334).

Voiding of State Sedition Law. In August deputy sheriffs raided the homes of anti-poverty workers in Pike county and confiscated what the officers claimed to be subversive literature that promised to overthrow the "power structure" of the county. Arrest of the workers under Kentucky's sedition law led to an examination of the law by a panel of federal judges, who declared the act unconstitutional.

School Strikes. In September, teachers, parents, and bus drivers in Pike county rose up in protest against salary schedules, the condition of schools, and school equipment. All three groups won concessions, but not until the opening of schools had been seriously delayed by strikes. There was also a major strike by teachers in McCracken county.

Budget Cut. In November, Governor Breathitt ordered a $24,100,000 cut in the state budget because revenues had fallen. This was the amount by which the legislature had increased teachers' salaries.

The Economy. The 1967 growing season was a favorable one. The tobacco crop was reported to be below that of 1966 in poundage, but superior in quality. Industrial growth continued, in both number of new plants and expansion of existing plants.

THOMAS D. CLARK
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KENYA

Kenya enjoyed peace and a measure of prosperity in 1967. The government stepped up the pace of Kenyanization, or placing "control of the land and agricultural industry in the hands of Africans." Progress in economic cooperation was achieved with East African neighbors, and an agreement was reached with Somalia over a border dispute.

Government. The reorganization of the Kenya parliament, begun in 1966, was completed in 1967. Under the terms of the Parliamentary Constituencies Act of August 1966, the House of Representatives and the Senate were amalgamated into a unicameral National Assembly, consisting of 168 seats.

Economy. In 1967, Kenya experienced an economic boom sustained by foreign aid and investment. The U. S. Agency for International Development (AID) authorized a $3 million loan for road construction, and the Rothmans' cigarette company of South Africa provided $1.8 million for a new Kenyan branch. Three companies—the International Finance Corp., Barclays Overseas Development Corp., and the Commonwealth Development Finance Co.—made available nearly $7 million to develop tourism in Kenya.

The major economic effort, however, was in agricultural development, with a planned increase of 15.6% in 1967–68, as part of the Kenyanization policy. The International Development Association issued credits of $8.9 million for agricultural development, and the Kenya government has sought to increase the productivity of small farms and to replace subsistence farming with cash crops, particularly coffee. As part of the Kenyanization of agriculture, the minister of land and settlement announced on July 28 that in the future only Kenyan citizens could own land.

On June 14, Kenya's finance minister announced a 1967–68 budget of $232.4 million, an 11% increase over the 1966–67 budget. Imports rose from $249.2 million in 1965 to $314.7 million in 1966, and exports rose from $145.6 million to $174.4 million.

A sharp decline in the number of strikes resulted in fewer lost man-hours. A system of registration for skilled workers was inaugurated to promote their more efficient employment. A Kenyanization Bureau was established to ensure the replacement of noncitizens by Kenyans wherever possible, and foreign lawyers were barred from practicing.

Foreign Affairs. Diplomatic relations between Communist China and Kenya were broken on June 29. The Chinese had protested that a statement on June 26 in Kenya's National Assembly by Tom Mboya, minister for economic planning and development, made no distinction between U. S. imperialism and Chinese policy. Charging interference in its internal affairs, Kenya severed relations.

Early in 1967, Kenya expressed its willingness to negotiate the dispute with Somalia over the northeast province of Kenya, the Northern Frontier District. Somalia has claimed this arid region, and Somali raiders, called *shifta,* have operated across the frontier against units of the Kenya army and police Hoping to keep the great powers, which have supplied arms to both sides, out of the dispute, Kenya suggested reaching a settlement by a regional conference of the East African heads of state and the Organization of African Unity. On June 1, President Jomo Kenyatta announced a month's amnesty for *shifta,* during which time some 200 surrendered. On October 28, Kenyatta and Somali Premier Mohammed Haji Ibrahim Egal met in Arusha, Tanzania with Zambia's President Kenneth Kaunda as mediator, and agreed to curb the border war and restore diplomatic relations between their nations.

On June 6, President Kenyatta signed a 15-year East African Co-operation Treaty in Kampala Uganda, effective December 1967. The treaty establishes an East African Community, which will supersede the East African Common Services Organization and create an East African Common Market The presidents of the three member states, Kenya Tanzania, and Uganda, will direct the executive functions of the community.

ROBERT O. COLLINS
University of California at Santa Barbara

KIESINGER, Kurt Georg

Chancellor of West Germany: b. Ebingen Württemberg, Germany, April 6, 1904.

After his election to the chancellorship of the Federal Republic of Germany on Dec. 1, 1966, Kiesinger formed a government that united the two major West German parties, the Christian Democrat

KENYA • Information Highlights

Area: 224,959 square miles (582,644 sq km).
Population: 9,643,000 (July 1, 1966 est.).
Chief Cities (1962 census): Nairobi, the capital, 266,794; Mombasa, 179,575; Nakuru, 38,181; Kisumu, 23,526.
Government: *President*—Jomo Kenyatta (took office as prime minister June 1, 1963; became president Dec. 12, 1964). *Parliament*—National Assembly, 168 members (party seating, 1966: Kenya African National Union, 161; Kenya People's Union, 7).
Religious Faiths: Anglicans and Protestants, 47% of population; Roman Catholics, 10.5%; Muslims, 4%; others, 38.5%
Education: *Total school enrollment* (1964)—1,059,290 (primary 1,014,719; technical and secondary, 36,964; teacher-training, 4,849; higher, 2,758).
Finance (1966 est.): *Revenues,* $147,678,000; *expenditures* $201,449,000; *monetary unit,* East African shilling (7.14 shillings equal U. S.$1).
Gross Domestic Product (1966): $1,114,000,000.
Economic Indexes: *Manufacturing* (1965), 158 (1958=100) *cost of living* (1966), 117 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 470,400 gasoline, 264,000; wheat flour (1966), 78,240.
Crops (metric tons, 1966–67 crop year): Wheat, 127,000; sisal (1965), 64,000; coffee, 57,000; maize, 51,000.
Minerals (metric tons, 1965): Soda ash, 83,194; salt, 51,000 gypsum, 34,474; limestone (1964), 12,095.
Foreign Trade (1966): *Exports,* $174,440,000 (chief exports coffee, $52,640,000; tea, $24,360,000; sisal, $9,240,000) *imports,* $314,720,000 (chief imports, 1965: crude and partly refined petroleum, $25,396,000; motor vehicles, $23,537,000; iron and steel, $14,246,000). *Chief trading partner* (1965): Britain (took 21% of exports, supplied 28% of imports).
Transportation: *Roads* (1964), 26,051 miles (41,924 km).
Communications: *Telephones* (1967), 56,894; *tv stations* (1967) 3; *tv sets* (1967), 14,300; *radios* (1965), 350,000.

CHANCELLOR KIESINGER met with French President Charles de Gaulle (*left*) for talks in Bonn early in July.

WIDE WORLD

and Social Democrats, in a "grand coalition" representing 90% of the members of parliament. The loss of confidence that Chancellor Ludwig Erhard suffered in the economic crisis of 1966 had led to Kiesinger's nomination by the Christian Democrats and election by the Bundestag (lower house of parliament) by a vote of 340 to 109, with 23 abstentions.

First Year in Office. Chancellor Kiesinger's government immediately embarked on programs of "normalization" of relations with the states of eastern Europe and of economic reform. In his overtures to the East he ignored the "Hallstein doctrine," under which West Germany had denied recognition to governments that had formal diplomatic relations with East Germany, and obtained agreement to an exchange of ambassadors with Rumania and lesser accommodations with other countries of the Soviet bloc.

Chancellor Kiesinger also initiated a "dialogue" with East German Premier Willi Stoph, but anxiety in West Germany that the dialogue might lead to talk of recognition forced him in June to clarify the government's position that recognition of East Germany was out of the question.

Simultaneously, Kiesinger helped maintain understanding with the Federal Republic's Western allies. He met with French President de Gaulle in Paris in January, with British Prime Minister Wilson in Bonn in February, and with U. S. President Johnson in Bonn and Washington, respectively, in April and August.

In the economic sphere, Kiesinger's government initiated a plan that appeared to have arrested the recession by September and provided for a period of growth in 1968. (See also GERMANY.)

Background. Kiesinger was one of seven children of a Swabian bookkeeper. He attended public schools and a Catholic teachers' seminary before scholarship help enabled him to study law, history, and philosophy at the universities of Tübingen and Berlin.

In 1933, shortly before joining a Berlin law firm, Kiesinger joined the Nazi party. If he did so believing that National Socialism would moderate, Hitler's blood purge of June 30, 1934, disabused him of the notion. Although he remained in the party, he disassociated himself completely from its activities.

In World War II, Kiesinger was assigned in a subordinate position to the propaganda section of the German foreign office. He was interned for 18 months after the war, but was eventually cleared of any responsibility for Nazi war crimes. Thereafter he went into practice in Tübingen and rapidly became involved in politics. As a Christian Democratic member of the Bundestag from 1949 to 1958, he established a reputation for knowledge and eloquence, and expertise in foreign affairs.

On Dec. 17, 1958, Kiesinger was elected minister-president of Baden-Württemberg, a state he helped create when he was in the Bundestag. An able, successful, and popular governor, he remained in that office until his election to the chancellorship.

HAJO HOLBORN
Yale University

KING, Martin Luther, Jr. See biographical sketch under CIVIL RIGHTS.

KOREA

The presidential election of May 3 and the general elections of June 8 overshadowed all other events in South Korea in 1967. During the year, economic development concerned both Koreas. South Korea introduced its second 5-year plan (1967–71) and North Korea began a 3-year extension of its 7-year plan (1961–67).

SOUTH KOREA

Political Affairs. The president was elected by direct popular vote on May 3, and general elections for the National Assembly were held on June 8. The presidential election was on the whole orderly, but the general elections for the National Assembly were marred by irregularities.

The leading presidential contenders were President Park Chung Hee of the Democratic Republican party (Minju Konghwa-dang), who sought a second 4-year term, and former President Yun Posun, who represented the New Democratic party (Shinmin-dang). Although almost everyone had given up hope of uniting Korea's opposition groups, the prospect of a landslide victory for President Park's party had spurred development of a coalition, and on February 7 the New Democratic party was formed.

Concentrating on building the image of a hard-working and effective government, President Park and his party acclaimed the first 5-year economic plan (1962–66) a huge success, stating that 95% of its aims had been achieved. They further declared that the international position of South Korea had been strengthened through effective diplomatic policies, noting, for example, the normalization of relations with Japan in 1965 and the dispatch of nearly 49,000 troops to South Vietnam. In January 1967, President Park had approved a plan to send 20,000 reservists to South Vietnam. The cost is expected to be borne by the United States.

The opposition party, on the other hand, presented itself as a champion of the deprived and underprivileged. It accused Park's government of corruption, and it advocated reform of the economic structure, policies to encourage small and medium-sized businesses, more emphasis on agriculture, increases for government employees, lower taxes, and reduction of the powers of the government's Central Intelligence Agency.

Neither the intensive campaign nor the elections

WIDE WORLD

SOUTH KOREAN PRESIDENT Park Chung Hee won a second four-year term in office in elections held May 3.

GEN. PARK CHUNG HEE was elected to a second term as president of South Korea on May 3, 1967, and was inaugurated on July 1. After the strongly contested parliamentary elections of June 8, his Democratic Republican party finally emerged with 122 of the 175 seats in the National Assembly. His government continued during 1967 to cooperate with the United States in giving military support to South Vietnam by sending 20,000 more soldiers.

Park was born in Sangmo, North Kyŏngang Kyongsang province, on Sept. 30, 1917. He studied at Taegu Normal School and taught primary school from 1937 to 1940. In 1946 he joined the army of the newly established Republic of Korea. He headed the military junta that took control of the government in 1961, and became acting president and chairman of the Supreme Council for National Reconstruction. In 1963 he took office as president.

produced any surprises. With 10,215,000 votes cast, President Park won by a margin of 1,160,000 votes. His victory was attributed to a favorable image, the effective organization and abundant funds of the Democratic Republican party, and the weaknesses of the opposition. Having been united only a few months before the election, the New Democratic party had little time to consolidate its forces and was hampered by a lack of funds.

In contrast to the presidential election, the general elections for the 175-member National Assembly were characterized by widespread use of illegal tactics and maneuvers by the government party candidates. Of the 131 territorial seats, the Democratic Republicans won 103 and the New Democrats 27; 1 remaining seat went to one of the nine minor parties. An additional 27 proportional seats went to the government party and 17 to the New Democrats, bringing the party totals to 130, 44, and 1.

The New Democrats immediately challenged the validity of the elections, and riots broke out in Seoul and Pusan. Finally, President Park announced the dismissal of eight of his party's elected assemblymen, which reduced its seats to 122. The opposition party, however, continued to demand new elections throughout South Korea, and resolved to boycott the Assembly. The seventh Assembly was opened in August by the government party alone, but by November 20 the New Democrats had agreed to end their boycott of the Assembly meetings.

Foreign Affairs. A meeting of cabinet-level officials of South Korea and Japan was held in Tokyo from August 9 to 11 to discuss economic affairs. The Japanese government agreed to permit the extension of $200 million in commercial credits to assist South Korea's new 5-year economic plan.

Tension between North Korea and South Korea was further aggravated during the year. On Jan. 19, 1967, a South Korean naval vessel patrolling fishing waters near the truce line was sunk by a barrage from the shore. There were also frequent attacks below the line by North Korean contingents upon both U. S. and South Korean patrols, guard posts, and railroad facilities.

Economic Developments. According to data released by the government in 1967, South Korea attained an annual growth of 8.3% between 1962 and 1966, and per capita income had increased 43.2% since 1961.

SOUTH KOREA • Information Highlights

Area: 38,004 square miles (98,431 sq km).

Population: 29,608,000 (April 30, 1967 est.).

Chief Cities (1965 est.): Seoul, the capital (1966 prov. census), 3,800,000; Pusan, 1,419,808; Taegu, 811,406.

Government: *President*—Park Chung Hee (took office Dec. 17, 1963; *Premier*—Chung Il Kwon (appointed May 9, 1964). *Parliament*—National Assembly 175 members.

Religious Faiths: Buddhists, 27% of population; Roman Catholics, 21%; other Christians, 22%; Confucians, 17%.

Education: *Literacy rate* (1960), 71% of population. *Total school enrollment* (1964)—5,954,073 (primary, 4,726,297; secondary, 903,581; technical, 181,566; higher, 142,629).

Finance (1966 est.): *Revenues,* $383,779,000; *expenditures,* $500,497,000; *monetary unit,* won (270 won equal U. S.$1).

Gross National Product (1966): $3,208,000,000.

National Income (1966): $3,122,000,000; average annual income per person, $107.

Economic Indexes: (1966): *Industrial production,* 261 (1958=100); *agricultural production* (1965), 151 (1956–57=100); *cost of living,* 255 (1958=100).

Manufacturing (metric tons, 1966): Cement, 1,884,000; wheat flour, 303,600; crude steel, 216,000.

Crops (metric tons, 1965): Rice (1966), 5,900,000; sweet potatoes and yams, 1,679,000; barley, 1,135,000.

Minerals (metric tons, 1965): Graphite, 257,019 (ranks 1st among world producers); anthracite coal (1966), 11,616,000; limestone, 3,090,000; iron ore (1966), 789,600.

Foreign Trade (1966): *Exports,* $249,500,000 (chief exports, 1965: clothing, $20,713,000; wood and cork manufactures, $18,227,000; fish and preparations, $17,838,000; iron and steel, $12,747,000); *imports,* $716,400,000 (chief imports, 1965: manufactured fertilizers, $65,762,000; textile fibers and wastes, $59,741,000; nonelectrical machinery, $35,344,000). *Chief trading partners* (1965): U. S. (took 35% of exports, supplied 41% of imports); Japan (took 25% of exports, supplied 36% of imports).

Transportation: *Roads* (1964), 17,439 miles (28,057 km); *motor vehicles* (1965), 39,979; *railways* (1965), 1,897 miles (3,053 km); merchant vessels (1966), 44 (180,000 gross registered tons); *national airline,* Korean National Airlines (KAL); *principal airport,* Seoul.

Communications: *Telephones* (1967): 324,049; *television stations* (1966), 3; *television sets* (1966), 46,518; *radios* (1966), 2,287,000; *newspapers* (1966), 40 (daily circulation, 1965, 1,802,000).

The ambitious 5-year plan launched in 1967 called for an increase of 31% in per capita income, a decrease in the unemployment rate to 5%, adjustment of the foreign trade imbalance, and greater concentration on heavy industry.

NORTH KOREA

Political Affairs. Although the constitution of the Communist party, the Korean Workers' party, provides for a party congress every four years, the fifth party congress, which should have convened in 1965, was postponed, and in its place the second party representatives' conference was held in October 1966 to establish its political policies. In 1967 much of the internal propaganda was centered on exhorting party members and others to pursue these policies. They called for heightening revolutionary vigilance against the United States and South Korea, arming and fortifying North Korea, destroying internal enemies, intensifying the indoctrination of the masses, and simultaneously carrying out economic and defense construction programs.

Reports reaching the West indicated that the North Korean public was intensively screened during the year. Continuing economic difficulties and labor shortages necessitated the mobilization of students and others, particularly for agricultural production. The plenum of the Central Committee in July placed priority on the extractive and building-materials industries and emphasized the need to increase the production and improve the quality of mechanical facilities for metal, chemical, and agricultural products.

Foreign Affairs. North Korea moved much closer to Moscow in 1967. On January 27, the Central News Agency in P'yŏngyang denounced what it called wanton attacks by the Chinese Red Guards against the North Korean leadership. North Korea and the Soviet Union signed a new defense agreement, and on October 17 announced the establishment of a bilateral economic and scientific-technical consultative commission, based on a 1966 economic and technical cooperation agreement.

CHONG-SIK LEE
University of Pennsylvania.

The Pueblo Incident

On Jan. 23, 1968, four North Korean patrol boats captured the U. S. intelligence ship *Pueblo* and its 83-man crew off the coast of North Korea and took it to the port of Wonsan. Called an "act of war" in the United States, the seizure was justified by the North Koreans, who claimed that the Pueblo was spying in its territorial waters.

The United States immediately began diplomatic efforts to secure release of the Navy vessel. The Soviet Union was asked to mediate the crisis, and an emergency session of the UN Security Council was called on January 26. The U. S. rushed ships and planes to the area and called some 15,000 reservists to active duty.

The *Pueblo* incident followed an increasing number of North Korean truce violations and encroachments in South Korea, including an attempt on the life of President Park.

NORTH KOREA • Information Highlights

Area: 46,540 square miles (120,538 sq km).
Population: 12,400,000 (mid-1966 UN est.).
Chief City (1960 est.): P'yŏngyang, the capital, 653,100.
Government: *Chairman of Presidium of the Supreme People's Assembly*—Chou Yong Kun (took office 1957); *Premier*—Marshal Kim Il Sung (took office 1948). *Parliament*—Supreme People's Assembly, 383 members.
Education: *Total school enrollment* (1963–64)—2,570,000.
Finance (1965 est.): *Revenues,* $3,080,000,000; expenditures, $3,080,000,000; *monetary unit,* won (1.20 won equal U. S. $1).
Manufacturing (metric tons, 1965): Cement, 2,400,000; pig iron and ferroalloys, 1,635,000; metallurgical coke, 1,600,000; crude steel, 1,230,000.
Crops (metric tons 1963): Rice, 2,900,000.
Minerals (metric tons, 1965): Graphite, 70,000 (ranks 3d among world producers); coal, 14,900,000; iron ore, 4,300,000; magnesite, 900,000; salt, 498,850; apatite, 203,000; pyrites, 179,832; zinc, 105,000; lead, 60,000; silver, 640,000 troy ounces; gold, 160,000 troy ounces.
Foreign Trade (1962): *Chief exports:* Metals, 48.5% of total export value; farm products, 12.6%; minerals, 11.2%; *chief imports:* machines, 34.1% of total import value; fuel, 22.2%; textiles, 11.3%. *Chief trading partners:* USSR, 60%; Communist China, 3%.
Transportation: *Railways* (1964), 6,500 miles (10,460 km); *merchant vessels* (1966), 1 (2,000 gross registered tons); *principal airport,* P'yŏngyang.
Communications: *Radios* (1961): 600,000.

KOSYGIN, Aleksei Nikolayevich

Premier of the Union of Soviet Socialist Republics: b. St. Petersburg, Russia, Feb. 20, 1904.

Premier Kosygin spent much of the year 1967 traveling in remote parts of the Soviet Union and throughout the Western world as a kind of roving ambassador for the Soviet government. In foreign affairs his voice appeared to be the authoritative one of the Soviet Union.

Siberian Tour. In January, Kosygin and other top party officials toured Soviet republics in central Asia and Siberia to win the support of provincial party officials for the government's anti-Maoist China policy. At a press conference on February 9, Kosygin attributed the violence in China to a government attempt to hide its failures, and he said that the Soviet Union was the friend of Chairman Mao Tse-tung's foes.

Western Travels. From February 6 to 13, Kosygin was in London, where he and British Prime Minister Harold Wilson agreed to install a "hot line" between the Kremlin and Whitehall. They also discussed the war in Vietnam, though the nature of their conversations was not revealed during the course of the talks. On February 14, however, Wilson declared that they had drawn up and secretly presented to the United States and North Vietnam a peace plan that "almost" brought peace.

On June 16, Premier Kosygin left on a 14-day trip that took him to Paris, New York, and Havana. He went to New York to represent the USSR at a meeting of the UN General Assembly that the Soviets had requested because of the Israeli-Arab war.

WIDE WORLD

SOVIET PREMIER KOSYGIN (*center*) sees sights of New York City during his visit to the United States in June.

While he was in the United States, he and President Johnson conversed on June 23 and 25 at a hastily arranged summit meeting in Glassboro, N. J. Although Johnson termed the meeting a "success," no meeting of minds on either the Middle East or Vietnam conflicts was disclosed. Kosygin's conferences with French President de Gaulle on both his outward and homeward journeys, on the other hand, revealed a considerable identity of views, according to Premier Kosygin.

In Havana, Kosygin received a cool reception, but he discovered increasing warmth during his stay. Nevertheless, it appeared that he and Premier Fidel Castro were essentially friends in need, with fundamentally divergent viewpoints on foreign policy, especially with respect to Latin America.

Policy Positions. Despite his evident efforts to play a moderating role in the troubled world affairs of 1967, Kosygin maintained inflexible pro-Arab and pro-Hanoi positions on the two most important problems threatening world peace. On October 30 he reiterated the Soviet Union's unqualified support of Hanoi's terms for peace talks.

Background. Kosygin was born of laborer parents. He volunteered for service in the Red Army at the age of 15 and joined the Communist party in 1927. Trained at party expense as a textile engineer, he became an industrial administrator and, in 1938, mayor of Leningrad. He became finance minister in 1948 and, despite setbacks after Stalin's death in 1953, he advanced to the position of first deputy minister of the USSR in 1960. In 1964, with Leonid I. Brezhnev, he helped displace Premier Khrushchev.

ELLSWORTH RAYMOND
New York University

KUWAIT

Kuwait played an important role in Arab affairs in 1967, providing both financial assistance and political support in the war against Israel. Internally, elections in Kuwait early in the year reaffirmed support for the royal family.

Foreign Affairs. Following clashes between Israel and Syria in April, the National Assembly sent a communiqué to the United Nations condemning Israeli actions. Kuwait confirmed its stand that any aggression against an Arab state was an attack against all Arab states, and that all necessary support would be given to any Arab state so attacked.

Although the 6-day Israeli-Arab war in early June greatly concerned Kuwait, the country was not directly involved in the fighting. Prior to the special session of the UN General Assembly in June, the foreign ministers of 13 Arab states met in Kuwait to try to forge a common policy toward Israel. Amir Sabah al-Salim al-Sabah later attended the Arab summit conference in August at Khartoum, Sudan, where he agreed to provide £55 million annually to the United Arab Republic until the effects of the Israeli penetration had been eliminated.

Political Affairs. Elections were held on January 25 for the second National Assembly (the first was elected in 1963). The country's leading Nasserite was defeated, and the Arab nationalists had their number reduced from eight to four. A large majority of the new National Assembly supports the ruling al-Sabah family. A new cabinet was sworn in, with Crown Prince Jabir al-Ahmad al-Sabah again serving as prime minister. Four of the other 12 ministers are members of the royal family. The National Assembly was convened on October 28.

Economy. Oil continued to form the basis of Kuwait's economy. Proven reserves increase annually and on Jan. 1, 1967, stood at over 75 billion barrels. Income from petroleum accounts for 94% of the national budget for the year ending March 31, 1968.

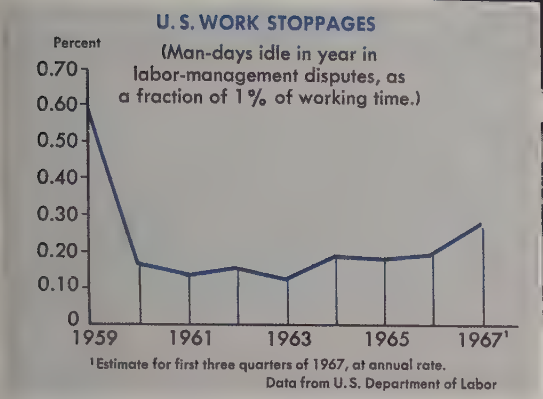
SYDNEY NETTLETON FISHER
The Ohio State University

KUWAIT • Information Highlights

ASIA
AFRICA

Area: 6,178 square miles (16,000 sq km).
Population: 491,000 (Aug. 1, 1966, est.).
Chief Cities (1965 census): Kuwait City, the capital, 99,609; Hawalli, 64,542; Salmiyah, 38,648.
Government: *Amir*—Sabah al-Salim al-Sabah (took office Nov. 27, 1965); *Prime Minister*—Jabir al-Ahmad al-Sabah (took office Nov. 30, 1965). *Parliament*—National Assembly, 50 members.
Religious Faiths: Muslims, 94% of population; Roman Catholics, 1.3%; other Christians, 3.7%; others, 1%.
Education: *Literacy rate* (1965), 54% of population aged 10 and over. *Total school enrollment* (1964–65)— 69,581 (primary, 44,131; secondary, 23,829; teacher-training, 680; technical, 941).
Finance (1964–65 est.): *Revenues*, $574,000,000; *expenditures*, $312,000,000; *monetary unit*, dinar (0.3571 dinar equals U. S.$1).
Gross National Product (1966): $1,699,600,000.
National Income (1966): $1,598,800,000; average annual income per person, $3,400.
Manufacturing (metric tons, 1965): Residual fuel oil (1964), 8,638,000; distillate fuel oil, 2,734,000.
Minerals (metric tons, 1966): Crude petroleum, 114,396,000 (ranks 5th among world producers).
Foreign Trade (1966): *Exports*, $1,303,960,000 (chief export, 1964: crude petroleum, $1,100,000,000); *imports*, $462,840,000 (chief imports: electrical machinery; transport equipment; nonelectrical machinery). *Chief trading partners* (1965): U. S. (took 5% of exports, supplied 21% of imports); Britain (took 4% of exports, supplied 16% of imports); Japan (supplied 9% of imports).
Transportation: *Paved roads* (1964), 71 miles (115 km); *motor vehicles* (1965), 80,100 (automobiles, 58,000); *merchant vessels* (1966), 10 (130,000 gross registered tons); *civil airline*, Kuwait Airways Corporation.
Communications: *Telephones* (1967): 31,528; *television stations* (1967), 2; *television sets* (1967), 80,000; *radios* (1964), 175,000; *newspapers* (1964), 4.

LABOR



UPI

LABOR SECRETARY Wirtz (*2d from right*) met in September with negotiators trying to end the 1967 copper strike.

Major strike-free settlements were achieved in early 1967 in the petroleum refining, apparel, and communications industries, and between some railroad unions and the carriers. But before the year ended, deadlocks developed in major negotiations in the trucking, railroad, rubber, copper and automobile industries.

As the year began, the economic expansion of the 1960's looked tired for the first time since it began in February 1961. As a result of slower consumer spending, falling activity in housing, and a steep drop in inventory accumulation, there was no real expansion of gross national product in the first quarter of 1967. Activity began to pick up in the second quarter, and by the close of the third quarter the economy appeared to be off and running again. However, the higher activity did not translate into lower unemployment than that of 1966.

The average unemployment rate remained at the 3.8% level reached in 1966.

Despite quickening activity in the second half of 1967, unemployment rates began to rise, reaching 4.3% in October, the highest monthly rate in two years. The rise was attributed to an unusual expansion of the labor force. It was followed in November by a drop to 3.9%, representing the largest month-to-month decline in six years. In December the unemployment rate dropped further, to 3.7%. (See also ECONOMIC REVIEW.)

STRIKES AND SETTLEMENTS

Major collective bargaining agreements—those affecting 1,000 or more workers—were concluded for about 4.6 million workers in 1967. This contrasts with the coverage of 3.4 million workers by major new agreements in 1966.

Time lost because of work stoppages in 1967 was the highest since 1959. In the first three quarters of 1967, an estimated 3,765 stoppages involved 2.5 million workers and caused the loss of 28.3 million man-days. In 1966 an estimated 3,685 stoppages occurred in the first three quarters, affecting 1.6 million workers and costing 19.4 million man-days. About 0.27% of work time (1 out of every 370 man-days) was lost in 1967, compared with 0.19% (1 out of every 526 man-days) in 1966.

Many factors caused the longer stalemates in collective bargaining in 1967, and at least four of the reasons can be isolated:

(1) Because of the sudden rise in consumer prices in 1966, which continued in 1967, labor sought wage increases large enough to offset the price rises.

(2) Because profits advanced faster than aggregate labor income during the expansion of the 1960's, some labor negotiators sought in 1967 to restore previous income shares.

(3) Within labor, some skilled workers were demanding that significant progress be made in restoring differentials between their pay and that of lesser skilled workers, forcing labor negotiators to work for supplemental increases.

(4) In a time of high employment, some labor shortages, and generally good economic expectations, labor took the opportunity to achieve goals in wages and working conditions that could not be reached during the relatively high unemployment of the late 1950's and the early 1960's.

In his 1967 economic report, President Johnson urged "utmost restraint" in wage and price actions, and the Council of Economic Advisers reaffirmed that the average postwar productivity increase was the "only valid and noninflationary standard for wage advances." But settlements in the railroad, trucking, rubber, automobile, and apparel industries and the settlement decreed by the federal arbitration panel in the railroad shopcraft dispute exceeded the average productivity gain.

Railroads. A confrontation between the carriers and six shopcraft unions resulted in a 2-day nationwide railroad stoppage in mid-July. The 1967 chain of events began when a presidential emergency board was appointed on January 28 under the Railway Labor Act. On March 10 the board recommended a settlement of the dispute, but the recommendation was rejected by unions and carriers.

The unions moved to strike in April and May but were delayed by congressional resolutions. When President Johnson's proposal of "mediation to finality" was not enacted, shopcraft union walkouts and car-

UAW
ON
STRIKE
FOR
EQUITY FOR
SKILLED
WORKERS
STRIKE

UPI

PICKETING a Dearborn, Mich., plant, the United Auto Workers in September begin a nationwide strike against Ford.

rier lockouts tied up the nationwide system on July 16 and 17. On July 17 Congress enacted a law under which a 5-man panel, headed by Sen. Wayne Morse of Oregon, was appointed by the President to propose a settlement.

After the unions and carriers failed to agree during a 90-day period provided by the law, the settlement became effective on October 16. The settlement, a 2-year contract, provided a 6% general increase retroactive to the beginning of 1967; a 5% increase on July 2, 1968; and an additional 20 cents an hour to "journeymen and mechanics." It requested that a wage study be made by the U. S. Department of Labor to facilitate future negotiations.

Trucking. Another nationwide transportation stoppage occurred in trucking. When the Teamsters (representing about 450,000 members) and Trucking Employers, Inc. (representing about 1,500 trucking companies) failed to agree on a new national contract by the end of March, some locals walked out, and the trucking companies instituted a "defensive" lockout. It was the first stoppage in the history of the Teamster-Trucking Employers negotiations. A tentative 3-year agreement calling for a reported 60-cent increase in wages and fringe benefits was reached on April 12 and was submitted to locals for approval on April 27. But when Chicago Teamsters and an independent Chicago union held out for and won better terms, a new national agreement for general freight hauling was negotiated on May 4 without revealing results of the balloting. The agreement provided a 70-cent increase—including 55 cents in wages—over the 3-year contract. Subsequent to the national negotiations, there was a wildcat 9-week, 9-state walkout by 15,000 steel-hauling truck-drivers, most of them Teamsters, before an agreement was reached.

Rubber. The Rubber Workers engaged in the longest strike—over 3 months—in the history of the rubber industry before agreement was reached with the Big Five rubber companies (Firestone, General, Goodrich, Goodyear, and Uniroyal). The strike began on April 21 in the Firestone, Goodrich, and Uniroyal plants and ended on July 28 at Uniroyal. General wage increases were reported at 43 cents an hour over the 3-year contract; skilled workers received an additional 10 cents. The supplemental unemployment benefits program was improved to provide laid-off workers up to 80% of normal earnings.

Copper. In the first real test of coordinated bargaining in nonferrous metals, about 42,000 workers struck eight major cooper-producing firms in mid-July in a dispute over wages, pensions, and escalator clauses. The Steelworkers' Union, which had recently absorbed the independent Mine, Mill, and Smelter Workers, led the strike, and members of 25 other unions participated. A 3-man federal mediation team failed to reopen meaningful negotiations in the deadlock, and a September conference with administration officials failed similarly. The strike continued throughout the rest of 1967 without a hint of a settlement.

Automobiles. A strike was expected in the automobile industry, and it came on September 6 as 160,000 Ford Motor Company workers walked off the job. The United Automobile Workers demanded a large general increase, a supplemental increase for skilled workers (who could veto any settlement), and a guaranteed annual wage with a salary provision.

The settlement that emerged on October 25, after a 49-day strike, provided general increases reported at 72 cents hourly for skilled workers and 42 cents hourly for other workers, spread out over three years. The escalator clause was modified to omit increases in the first year, and to set ceilings of 8 cents in each of the last two years. The supplemental unemployment benefits program was raised to provide a guarantee of 95% of normal pay less a $7.50 deduction for work-related expenses.

A similar settlement was reached with Chrysler Corporation on November 8, only hours before a strike deadline. On December 15, General Motors Corporation and the UAW reached an agreement that matched the earlier auto industry settlements.

Public Employees. Strike activity continued to grow among public employees, particularly teachers. School starts in September were delayed in New York City, Detroit, East St. Louis, McCracken County, Ky., and Broward and Pinellas counties, Fla., by "mass resignations."

The New York walkout ended after the school board raised its prewalkout offer by $10 million, and the Detroit stoppage ended with a compromise of the teachers' salary demands. Nationwide sanctions against accepting teaching jobs in Florida were lifted by the National Education Association after the Florida Education Association reached an agreement with Gov. Claude R. Kirk, Jr.

Policemen threatened noncooperation short of strikes in New York and Detroit to enforce contract demands, and there was a brief walkout of police and firemen in Youngstown, Ohio.

Other Settlements. Major agreements reached in 1967 for workers in the apparel and meat-packing industries were based on a pattern established early in the year, and for those in communications on a pattern carried over from 1966.

Apparel contracts generally provided a 15% wage increase spread over three years and covered about 300,000 workers.

The first meat-packing agreements were set on March 13 at the Armour and Wilson companies. The 3-year contracts raised wages by an average of 34 cents an hour and provided better protection from plant closings. Between April and September similar contracts were signed between the meat-packing unions and the Cudahy, Mayer, Morrell, Rath, and Swift companies. In each instance the terms were retroactive to March.

TRADE UNION DEVELOPMENTS

To achieve its economic goals, organized labor in large industries continued to rely on three basic tactics, often in combination: (1) multiunion or coordinated bargaining, as in the 19-union confrontation with the copper producers; (2) industrywide bargaining, as in the national trucking negotiations; and (3) pattern bargaining, as in negotiations in the automobile, apparel, and also the meat-packing industries.

Bargaining Goals. Full employment remained the primary economic goal of organized labor, and actions to promote its achievement—such as federal moves to loosen the money supply—were encouraged and applauded. The usual union goals on wages, fringe benefits, and working conditions were prominent in the heavy round of bargaining in 1967. A goal stressed in many bargaining agendas was supplemental boosts for restive skilled workers. In the automobile and rubber industry negotiations, guaranteed income for a year was another goal, as was equalization of pay within the industry (tire and other rubber workers) and between United States and Canadian auto workers.

Organization of white-collar workers and the working poor continued to be strategic goals of labor. Data released in 1967 revealed that some of the largest recent gains were scored by white-collar unions such as the Retail Clerks International and the Federation of State, County, and Municipal Employees.

Unionization of agricultural workers in the California grape fields, begun in 1965 by the AFL-CIO through its United Farm Workers Organizing Committee, achieved its greatest success to date when the committee signed a 3-year agreement with the Di Giorgio Corporation, covering 3,000 workers. The agreement ended an 18-month dispute. Wages and piece rates were adjusted to provide a 15-cent hourly increase retroactive to the fall of 1966, a 25-cent hourly increase beginning April 3, 1967, and a 5-cent hourly increase to begin April 3, 1968. Premium pay for six designated holidays, fringe benefits, seniority, and grievance procedures were also granted.

Leadership. There were few shifts in trade union leadership in 1967, but a removal and a rift received considerable public attention. The continuing court fight between James R. Hoffa and the U. S. Justice Department climaxed with the imprisonment of the Teamster leader on March 7 as the result of the 1964 conviction on a charge of tampering with a jury. Upon refusal by the Supreme Court to review his conviction, Hoffa began serving an 8-year sentence in a federal penitentiary at Lewisburg, Pa. Leadership of the Teamsters passed to Frank E. Fitzsimmons, who had been elected in 1966 to a new general vice presidency.

The biggest union within the AFL-CIO—the United Automobile Workers—took one step toward separation from the 11-year-old federation during 1967. In this move, taken February 3, all UAW officials resigned all positions in the AFL-CIO, other than their positions in—and UAW President Walter P. Reuther's leadership of—the Industrial Union Department. Reuther disclaimed any personal feud with George Meany, president of the AFL-CIO. A letter mailed to UAW locals attributed the break to the complacency of the federation and to its failure to act as a social catalyst. At an April convention, UAW delegates backed up officials by empowering them to take whatever steps would serve the "best interests" of the union and the labor movement. A possible withdrawal from the federation was implied. But no formal break came. The UAW continued to pay assessments to the federation, and the latter offered to discuss issues but declined a public debate. In September the federation pledged full support of the UAW in the bargaining round with the automobile manufacturers.

In addition to William Pollock, president of the Textile Workers who replaced Reuther, two other new faces appeared on the AFL-CIO executive council in 1967: John H. Lyons, president of the Iron Workers, replaced 85-year-old Harry Bates, who retired; and Max Greenberg, head of the Retail, Wholesale, and Department Store Union, was elected to a seat.

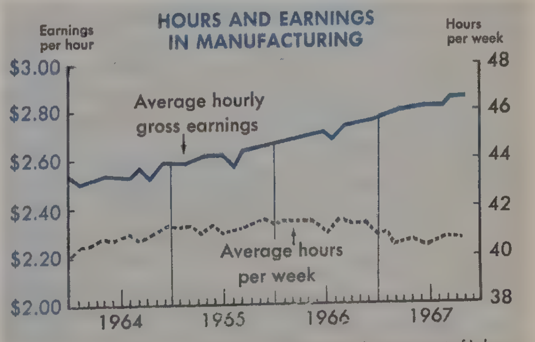
Membership. The AFL-CIO in 1967 reached its highest membership total since the 1962–63 trough in membership—a monthly average of 14.3 million, up about 900,000 from the 1966 level. U. S. Labor Department tabulations released in 1967 showed that overall union membership in the United States and Canada, including unaffiliated unions such as the Teamsters, had reached 19.1 million in the previous year. Excluding Canadian membership, the U. S. total was 17.9 million, up 6% since 1964. Organized employees in the United States represented about 28% of nonfarm employment.

Mergers. Unions continued to merge or move toward merger. The independent Mine, Mill, and Smelter Workers' Union was absorbed by the Steelworkers' Union at midyear as a result of ratification of the proposed merger at the Mine-Mill convention in January. Officials of the defunct union became officials or staff members of the Steelworkers.

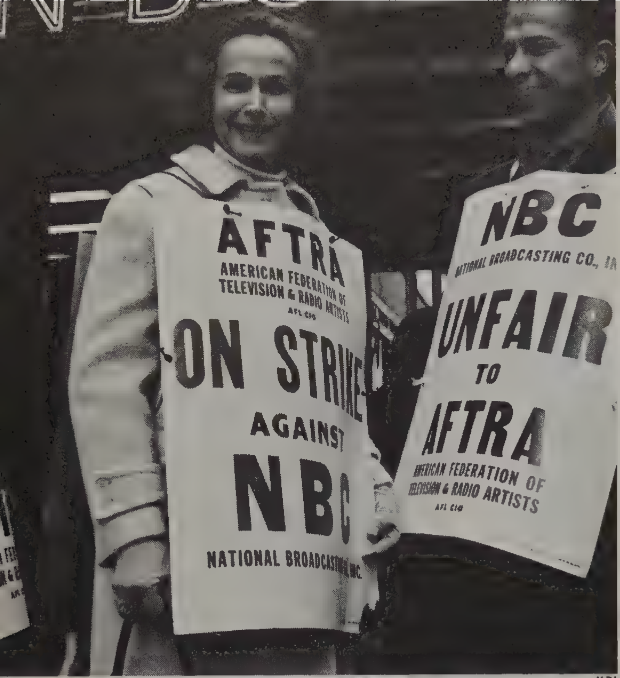
With over 240,000 members between them, the Pressmen and Typographers agreed to settle jurisdictional disputes according to seven principles. It was later reported that the unions had agreed to work toward a formal merger.

LEGISLATION AND COURT ACTIONS

Federal Legislation. The only significant piece of federal labor legislation enacted in 1967 was the law passed on July 17 setting up a 5-man panel to settle the railroad shopcraft dispute. Much of organized labor's federal legislative effort was directed toward improved social security benefits and parrying possible antistrike laws. None of the labor-backed bills that had narrowly missed passage in the 89th Congress emerged from the first session of the 90th Congress.


HOURS AND EARNINGS IN MANUFACTURING

Data from U. S. Department of Labor


AFTRA
AMERICAN FEDERATION OF TELEVISION & RADIO ARTISTS
AFL-CIO
ON STRIKE AGAINST NBC
NATIONAL BROADCASTING CO., INC.
NBC
NATIONAL BROADCASTING CO., INC.
UNFAIR TO AFTRA
AMERICAN FEDERATION OF TELEVISION & RADIO ARTISTS
AFL-CIO

UPI

ACTRESS KIM HUNTER and announcer Vic Roby join other AFTRA pickets striking the National Broadcasting Company in one of several 1967 labor disputes in the performing arts.

State Legislation. State wage and income maintenance standards were strengthened in a number of states. The floor was raised in 11 state minimum-wage laws. Seventeen states enacted minimum-wage laws, bringing the total of states with such laws to 41. There were widespread although modest increases in workmen's compensation and unemployment insurance benefits.

Seventeen states passed major laws affecting labor-management relations in the public service. Erasing the 20-year-old Condon-Wadlin Act, New York passed what it hoped would be a model act for such labor relations. The new law, called the Taylor Act, sanctions collective bargaining and forbids strikes. It was applied in efforts to end a walkout of New York City schoolteachers shortly after it went into effect on September 1.

Supreme Court. In four important decisions in 1967, the U. S. Supreme Court upheld union positions on fair representation, job preservation, and internal discipline, and clarified its ruling on employer discrimination in labor-management relations.

In *Vaca* v. *Sipes*, the Supreme Court ruled that a union member may sue his union for unfairly representing him, but it held that in this case the plaintiff had failed to prove the union was "arbitrary, discriminatory," or acting in "bad faith" when it refused to press his grievance to arbitration. The lone dissenter, Justice Hugo L. Black, argued that the majority placed too heavy a burden on the worker.

The substance of the 5-4 decisions in both *National Woodwork Manufacturers Association* v. *NLRB* and *Houston Insulation Contractors Association* v. *NLRB* dealt with "will not handle" clauses in collective bargaining agreements. The high court ruled that such clauses were legal where the intent was to preserve jobs traditionally performed by union members. In *Woodwork*, the Carpenters had refused to handle prefitted doors, forcing the employer to obtain unfitted doors to be fitted at the jobsite. (See also LABOR—*Labor Law.*) In *Houston*, the Asbestos Workers had refused to use precut and premitered fittings in accordance with a clause in their contract.

In another 5-4 decision in *NLRB* v. *Allis-Chalmers Manufacturing Co.*, the court ruled that a union could fine members who refused to observe a lawful strike. The majority cited the legislative history of the Labor-Management Relations Act (LMRA) and the Landrum-Griffin Amendments to support their decision. (See also LAW.)

The court in *NLRB* v. *Great Dane Trailers, Inc.* enunciated criteria for measuring employer discrimination: an unfair labor practice can be found in any case where an employer's actions are inherently destructive of important rights granted to employees by the LMRA, but antiunion discrimination must be proved in cases where the employer's conduct is only slightly destructive of employees' rights and rests on a legitimate business purpose. In this case, the court majority held that the employer's conduct was discriminatory because no legitimate business purpose was involved. (See also LAW.)

National Labor Relations Board. After 11 years, the case arising from the closing of a Darlington, S. C., textile mill was still being adjudicated. The NLRB received the case, involving Darlington Manufacturing Co. and Textile Workers Union, on remand from the Supreme Court, which ruled that a company may close its entire business for any reason but may not close part of it if the intent is to "chill" unionism in the remainder. The NLRB then ruled that Deering Milliken Inc. had indeed shut down its newly unionized Darlington plant, putting 500 persons out of work, to dampen union organization at any of its other plants.

THE LABOR FORCE

In his 1967 Manpower Report to Congress, President Johnson affirmed the federal government's commitment to a "vigorous economy and an effective educational system" as the "bedrock of an effective manpower policy." To assure economic vigor, the government acted through monetary easing, accelerated transfer payments, and unfrozen appropriations to stimulate the sluggish economy of early 1967. In addition to more federal aid to traditional schools, effective education was fostered by continued government-financed training programs to prepare the poor, Negroes, youth, and other unemployed persons for jobs.

The number of persons in the civilian labor force rose by about 1.6 million during 1967 to an average of 77.3 million, an increase of about 2% over the 1966 average. About two thirds of the expansion was attributable to women, who continued their high rate of movement into the labor force. Most of the

U.S. LABOR FORCE ESTIMATES
(Seasonally adjusted)

	October 1967	October 1966
Total labor force	81,460,000	79,360,000
Civilian labor force	77,997,000	76,081,000
Men, 20 years and over	45,513,000	44,723,000
Women, 20 and over	26,092,000	24,884,000
Youths, 16 to 19 (both sexes)	6,392,000	6,474,000
Employed civilians	74,630,000	73,199,000
Agriculture	3,707,000	3,779,000
Nonagriculture industries	70,923,000	69,420,000
Unemployed civilians	3,367,000	2,882,000

Source: U.S. Department of Labor, Bureau of Labor Statistics remaining expansion was attributable to men. Teen-agers showed little change from 1966 levels, indicating a falloff in the effects of the post-World War II baby boom. Reflecting a continuing phenomenon in labor force participation rates, proportionately more white than nonwhite men—but fewer white than nonwhite women—were in the civilian force.

Employment increased roughly in line with the expansion in the labor force, resulting in average unemployment rates remaining near the 1966 level of 3.8%. About 1.5 million new jobs were added during the year, bringing the seasonally adjusted total to about 74.4 million jobs, of which about 70.5 million were nonagricultural. The highest employment totals ever were reached during July and August—over 76 million, nonseasonally adjusted.

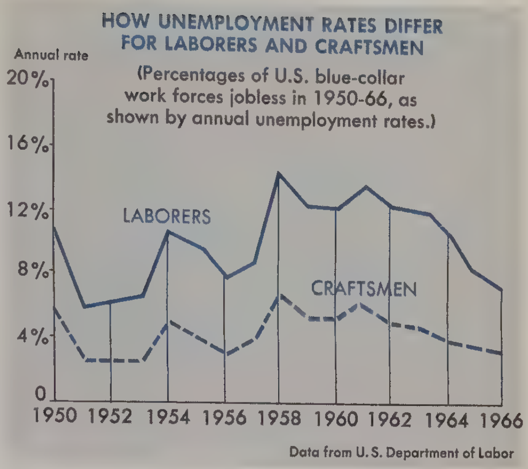
Almost all of the new jobs were in services, trade, and government—the principal growth sectors of the economy. Almost half were in government, about a third in services, and a sixth in trade. Most of the remaining jobs were in finance. Manufacturing employment approximated the 1966 level. Construction did not quite reach its 1966 highs. Mining employment continued to show a steady but shallow decline. Farm employment lost more jobs to nonfarm activities.

Men continued to constitute three fifths of the total of employed persons. Women made up one third and teen-agers the remainder. Some 19 out of every 20 workers were employed in nonfarm activities.

NONFARM PAYROLL EMPLOYMENT
IN THE UNITED STATES

Division and industry group	October 1967	October 1966
Total	**66,831,000**	**65,351,000**
Manufacturing	**19,382,000**	**19,640,000**
Durable goods	11,228,000	11,538,000
Ordnance and accessories	302,000	267,200
Lumber and wood products	596,800	607,800
Furniture and fixtures	458,000	472,800
Stone, clay, and glass products	637,700	647,900
Primary metal industries	1,249,700	1,352,400
Fabricated metal products	1,339,500	1,376,600
Machinery	1,916,800	1,943,600
Electrical equipment	1,916,400	1,979,900
Transportation equipment	1,905,800	1,980,000
Instruments and related products	453,600	446,200
Miscellaneous	452,100	463,300
Nondurable goods	8,154,000	8,102,000
Food and kindred products	1,869,300	1,857,000
Tobacco manufactures	100,600	95,400
Textile mill products	958,600	969,400
Apparel and other textile products	1,399,600	1,422,700
Paper and allied products	687,500	675,900
Printing and publishing	1,070,200	1,040,000
Chemicals and allied products	994,700	968,700
Petroleum and coal products	192,000	186,500
Rubber and plastic products	532,000	524,600
Leather and leather products	349,200	361,700
Wholesale and retail trade	**13,780,000**	**13,385,000**
Wholesale trade	3,594,000	3,500,000
Retail trade	10,186,000	9,885,000
Government	**11,859,000**	**11,193,000**
Federal	2,699,000	2,612,000
State and local	9,160,000	8,581,000
Services	**10,208,000**	**9,704,000**
Hotels and other lodging places	675,000	665,900
Personal services	1,031,000	1,024,200
Medical and other health services	2,493,500	2,259,500
Educational services	1,108,800	1,029,500
Transportation and public utilities	**4,286,000**	**4,219,000**
Contract construction	**3,450,000**	**3,466,000**
Finance, insurance and real estate	**3,267,000**	**3,117,000**
Mining	**599,000**	**627,000**

Note: Figures include all full-time and part-time employees in nonagricultural establishments. Proprietors, self-employed persons, unpaid volunteers, family workers, and private household workers are excluded. *Source:* U.S. Department of Labor, Bureau of Labor Statistics, for all series except federal government, which is prepared by the U.S. Civil Service Commission, and except Class I Railroads (included in the transportation total), which is prepared by the U.S. Interstate Commerce Commission.



HOW UNEMPLOYMENT RATES DIFFER FOR LABORERS AND CRAFTSMEN

(Percentages of U.S. blue-collar work forces jobless in 1950-66, as shown by annual unemployment rates.)

Data from U. S. Department of Labor

The number of unemployed persons fluctuated around 3 million, slightly above the 1966 average but below the 3.4 million average of 1965. Proportionately, about twice as many women, over twice as many nonwhites (mainly Negroes), and about six times as many teen-agers were out of work during 1967 as adult white men, whose unemployment rate is the lowest in the economy. About twice as many blue-collar as white-collar workers were unemployed. There were continuing shortages of skilled workers and a looser labor market for the lesser skilled.

Medium-term unemployment (5 to 14 weeks) rose between October 1966 (663,000) and October 1967 (884,000). Long-term unemployment (15 weeks or more) showed a slight drop from 435,000 in October 1966 to 415,000 in October 1967. The drop resulted from a 25% fall in longest-term unemployment (27 weeks or more).

Earnings and Prices. In August 1967, gross average weekly earnings were: construction, $159; mining, $137; factories, $115; nonsupervisory workers on nonfarm jobs, about $103; finance, insurance, and real estate, $96; and wholesale and retail trade, $84. After allowing for consumer price increases, the "real" average weekly earnings of workers was about $88, up about 50 cents over the August 1966 level. After allowance for federal social security and income taxes, the "spendable" average weekly earnings in current dollars were about $84 for those without dependents and about $92 for those with three dependents.

Negroes, Youth, and the Unskilled. The persistently higher-than-average unemployment rates of teen-agers (15.1% in October 1967), nonfarm laborers (9.2%), and Negroes (8.8%), prompted continued efforts to enlarge employment opportunities for them and to improve their skills. Federal data released in 1967 showed that in some big-city slums with predominantly Negro populations, unemployment rates were as high as in the Great Depression. Negroes in nonpoverty areas had higher unemployment rates than did whites in the poverty areas of cities. Regardless of race, young people and the unskilled have employment problems in an increasingly sophisticated economy.

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LABRADOR. See NEWFOUNDLAND.

LAOS

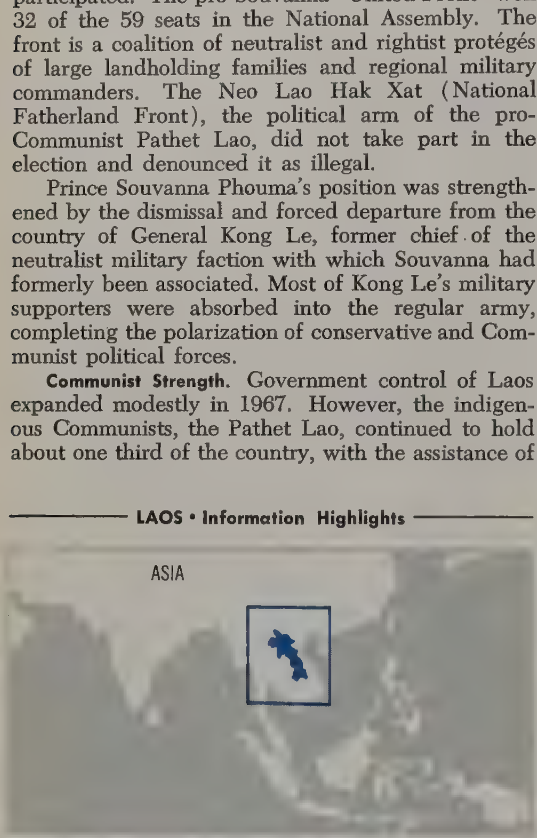
Anti-Communist forces in Laos consolidated their position in 1967. The former French colony continued to benefit from North Vietnam's inability to interfere decisively in its political life because of its preoccupation with the war in adjacent Vietnam. There was press speculation at year-end, however, on the possible entry of U. S. troops into Laos to stop the flow of South Vietnam-bound traffic on the Ho Chi Minh trail. Such an action would probably end the comparative immunity of Laos from the more disturbing repercussions of the Vietnam War.

Politics. The nominally neutralist government of Premier Prince Souvanna Phouma was returned to power as a result of the Jan. 1, 1967, election. It was the first full-fledged election held since 1960, and about 60% of the nation's 800,000 eligible voters participated. The pro-Souvanna "United Front" won 32 of the 59 seats in the National Assembly. The front is a coalition of neutralist and rightist protégés of large landholding families and regional military commanders. The Neo Lao Hak Xat (National Fatherland Front), the political arm of the pro-Communist Pathet Lao, did not take part in the election and denounced it as illegal.

Prince Souvanna Phouma's position was strengthened by the dismissal and forced departure from the country of General Kong Le, former chief of the neutralist military faction with which Souvanna had formerly been associated. Most of Kong Le's military supporters were absorbed into the regular army, completing the polarization of conservative and Communist political forces.

Communist Strength. Government control of Laos expanded modestly in 1967. However, the indigenous Communists, the Pathet Lao, continued to hold about one third of the country, with the assistance of approximately 40,000 North Vietnamese troops. About 25,000 of the North Vietnamese troops were engaged in servicing and guarding the Ho Chi Minh supply trail, a complex of roads and paths leading from North Vietnam, through Laos, to South Vietnam. An additional 15,000 Communist Vietnamese soldiers, located in the northeast, were used to protect and aid the Pathet Lao. The strength of the Pathet Lao was estimated at 25,000 men at most, and is believed to be declining. In comparison, the U. S.-equipped Laotian Army has about 72,000 men.

LAOS • Information Highlights



Area: 91,428 square miles (236,800 sq km).
Population: 2,700,000 (mid-1966 UN est.).
Chief City (1962 est.): Vientiane, the capital, 162,297.
Government: *King*—Savang Vatthana (acceded Nov. 4, 1959); *Premier*—Prince Souvanna Phouma (took office June 23, 1966); *Parliament*—National Assembly, 59 members (dissolved Oct. 7, 1966; elections held Jan. 1, 1967).
State Religon: Buddhism.
Education: *Literacy rate,* 15% of population. *Total school enrollment* (1964)—151,871 (primary, 145,432).
Finance (fiscal year 1967 est.): *Revenues,* $43,120,000; *expenditures,* $43,120,000; *monetary unit,* kip (240 kip equal U. S.$1).
Cost of Living Index (1966): 650 (1959=100).
Crops (metric tons): Rice (1966–67), 623,000.
Foreign Trade: *Exports* (1965), $1,000,000 (chief exports: benzoin, coffee, tin concentrates, wood products); *imports* (1966), $28,840,000 (chief imports: foodstuffs, machinery, petroleum products, textiles). *Chief trading partners* (1966): U. S. (supplied 25% of imports); Britain, France.
Transportation: *Roads* (1964), 2,734 miles (4,400 km); *motor vehicles* (1964), 7,103 (automobiles, 5,394); *national airline,* Royal Air Lao; *principal airport,* Vientiane.
Communications: *Telephones* (1966): 1,025; *radios* (1964), 50,000; *newspapers* (1965), 4 (daily circulation, 10,000).

Regular air strikes were flown against the Pathet Lao and North Vietnamese soldiers by both the Laotian Air Force and U. S. planes operating from neighboring Thailand. In August the U. S. Air Force confirmed the bombing raids in Laos for the first time, although they have occurred since 1964 and were an open secret. The main target of the U. S. planes was the Ho Chi Minh trail, although there were some operations in support of the apparently small U. S. Special Forces teams in the country.

The U. S. operations took place with the full endorsement of Premier Souvanna Phouma, but the Laotian leader opposed any U. S. extension into Laos of the anti-infiltration barrier under construction between North and South Vietnam. Although it might halt traffic along the Ho Chi Minh trail, such action, according to Souvanna, would "enlarge the Vietnam conflict at a time when we were all trying to limit and contain it." Souvanna similarly denied any plan for a joint U. S.-Thai movement of forces into the country to destroy Communist supply routes.

Planes of the North Vietnamese Air Force appeared over Laos for the first time in January 1968. On January 15 the government announced the loss of the fortress town of Nambac to Communist-led forces. It was the supply point for government operations throughout the north.

Economy. The guerrilla war waged by the Pathet Lao and the North Vietnamese continued to strain the country's economy. About 72,000 members of the 2,700,000 population bear arms, and half of the nation's budget is devoted to defense. On the other hand, the U. S. contribution of $57 million in economic aid underwrote for all practical purposes the Laotian military effort.

The national budget passed in July provided for new tax measures and the financing of the civilian budget almost wholly from the government's own receipts. The 5-nation Foreign Exchange Operating Fund, created in 1964 and extended for another year in 1967, played a major role in countering inflationary pressures and stabilizing the *kip*, the Laotian currency that is now one of the more stable currencies in Asia. Laos earned half of its government revenue in 1967 from an 8.5% tax on transactions involving gold. About $60 million worth of the precious metal moved in and out of the country during the year.

Foreign Relations. Laotian relations with most of the world continued cordial. In October, Souvanna Phouma visited the United States, France, Thailand, and Australia. The Soviet Union complained about U. S. military activity in Laos but would not endorse a British proposal to reconvene the 1962 Geneva Conference on Laos to appraise the situation. The Soviets seemed unwilling to do more than mildly protest American military actions as long as U. S. troops were not committed in significant numbers.

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LATIN AMERICA

UPI

AMERICAN CHIEFS OF STATE convene a summit conference at Punta del Este, Uruguay, on April 12. Meeting aimed at improved inter-American economic cooperation.

LATIN AMERICA

Latin American political stability in 1967 was fostered by increasing dissension among Communist groups and by effective military action in subduing guerrilla activities. If the immediate danger of leftist revolts had subsided, however, deteriorating economic conditions accompanied by an uninhibited population explosion were a serious threat to progress toward social mobilization. A common market to expand trade gained forensic support, but neither special economic assistance from the United States nor implementing legislation by the Latin American governments was forthcoming to give practical encouragement to this hemispheric goal.

COMMUNISM AND SUBVERSIVE ACTIVITIES

Dissension between Soviet and Cuban Communist factions and improved counterinsurgency capability of government forces discouraged guerrilla activities. The capture and execution of Cuban revolutionary leader Ernesto (Che) Guevara, in Bolivia in October, gave support to the belief that revolution was not about to be effectively exported by Cuba.

Communist Conference. The Organization of Latin American Solidarity (OLAS), the first regional revolutionary international, created by the Tricontinental Solidarity Conference of January 1966, met in Havana, Cuba, from July 31 to August 10. The conference was attended by 125 delegates from 27 nations and territories to promote the theme "the duty of every revolutionary is to make a revolution."

In addition to attacking "U. S. imperialism" and reactionary Latin American upper classes, the meeting condemned socialist countries that were trading with oligarchical Latin American governments. This resolution was aimed specifically at the Soviet trade offensive in the hemisphere: the USSR had concluded trade agreements with the Brazilian and Argentine military regimes and with Chile, and was negotiating pacts with Colombia and Venezuela.

Soviet Premier Aleksei Kosygin had warned Cuban Premier Fidel Castro, during a visit to Cuba on June 27–30, that conditions for successful revolutions did not exist in Latin America and that Cuba ran the same risk as the United Arab Republic in having pretensions that exceeded its power. The Soviet newspaper *Pravda,* on the eve of the first meeting of OLAS, reprinted a statement by the Chilean Communist leader Luis Carvalano, recalling Lenin's injunction against adventurism.

The OLAS meeting was packed with all sorts of extraneous drama. Stokely Carmichael, attending as an "honorary delegate" from the United States, called for Negro guerrilla warfare there comparable to the insurrectionary activities in Latin America. There were two displays of Cuban-exile saboteurs allegedly sent into Cuba by the U. S. Central Intelligence Agency. A hijacked Colombian plane with 71 passengers, forced to land in Havana, was subsequently released by the Castro regime.

Guerrilla Forces and Counterinsurgency. Guerrilla activity was suppressed by authoritarian military regimes in the Caribbean, often with the assistance of unofficial, radical-right vigilante groups. A new Cu-

LATIN AMERICA 1967: YEAR OF RELATIVE CALM

Despite the failure of the United States to promise special assistance for the Latin American Common Market and other new inter-American ventures in cooperation, the area enjoyed a year of relative tranquility in 1967. The year was darkened, however, by some low-key, largely frustrated guerrilla activity and the growing threat that a high birth rate will overtake the region's social, political, and economic progress.

MEXICO
GUATEMALA
EL SALVADOR
NICARAGUA

WIDE WORLD

NICARAGUA Troops patrol Managua after fighting broke out on January 22 when National Guard tried to end a demonstration over alleged rigging of forthcoming election.

ban-trained Nicaraguan organization, called the Sandinist Front of National Liberation, was smashed in October by the national guard, whose long-time director, Anastasio Somoza Debayle, had been elected president of Nicaragua on February 5. Dominican President Joaquín Balaguer blamed the Communists for a wave of shootings and bombings in April and May.

A Guatemalan guerrilla force was effectively contained by a police force reorganized with U. S. assistance. Army-encouraged rightist vigilante groups were operating outside the law with the tacit consent of Guatemalan President Julio César Méndez Montenegro and were held largely responsible for an estimated 1,500 deaths in 1967. Salvadorean President Col. Fidel Sánchez Hernández, backed by the country's military and the small landowning oligarchy, continued repressive measures against insurrectionists after assuming office July 1.

The authoritarian Argentine regime of Lt. Gen. Juan Carlos Onganía, having suppressed all political parties, as well as state and national legislatures, decreed a comprehensive and retroactive anti-Communist law on September 7. The decree provided for the national registration of Communists and required security clearance for all officials, including teachers, union leaders, and businessmen. The decree was to be enforced secretly and outside of legal processes by the state intelligence service.

Chile and Mexico, which enjoyed stable and progressive regimes, responded more tolerantly to Cuban adventurism. The ruling Chilean party, the Christian Democrats, adopted a policy resolution (July 11) that endorsed guerrilla warfare against governments that ignore the people's rights and offer no electoral solutions. The Chileans permitted the OLAS to operate within the country as long as it did not create or support insurgency.

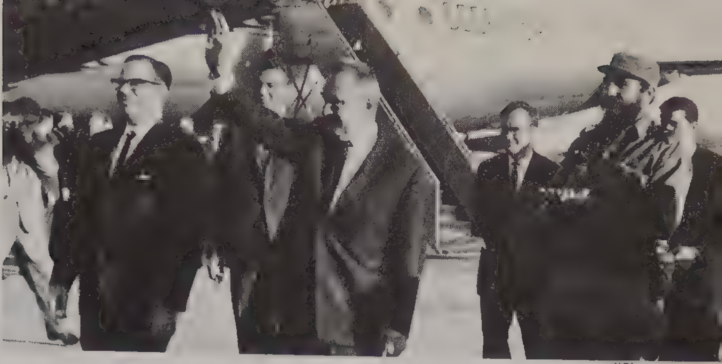
The Mexican government, which alone among the Latin countries continued to recognize the Castro regime in Cuba, nevertheless efficiently controlled subversive activities within its own borders. In March the secretary of the Cuban embassy in Mexico was expelled for attempting to pass $6,000 to agents of the Guatemalan rebels; and on July 24, 55 persons involved in subversive activities in rural areas were apprehended, and more than 20 tons of books, films, and folders were confiscated.

Venezuela, Colombia, and Bolivia, where enlightened regimes had made intensive efforts toward modernization, were selected as the special targets of Cuban guerrilla activity. On May 8, eight Cuban agents landed a dozen Cuban-trained Venezuelan saboteurs to join two guerrilla forces already operating in the Venezuelan hill country. They were quickly captured by the Venezuelan Army. In Colombia the pro-Castro National Liberation Army of 150 Marxist idealists competed with the Communist-led guerrilla band of 300 which controlled large areas of three southern provinces.

Ernesto (Che) Guevara, former Cuban minister of industry, who was last seen in Cuba in April 1965, arrived with seven Cuban officers at an isolated area in the foothills of the Bolivian Andes, Nov. 7, 1966, to commence what he called his "second adventure." By April 1967 the small band of Cubans and Bolivian recruits was able to make successful forays on ill-prepared Bolivian troops. At the request of the Bolivian government, the United States flew a 16-man Special Forces training team from its base in the Panama Canal Zone to Bolivia. By August 31 the Bolivian troops had successfully ambushed a 10-man guerrilla party, killing 7 of them.

The Bolivian military followed up their initial successes against the guerrillas with the capture of Guevara on October 8 and his execution the next day. In the eight years since Castro came to power, Cuba has spent $400 million on its wars of liberation, trained 5,000 guerrillas, and launched more than 15 attempts at revolution in 12 Latin American

CUBA
DOMINICAN REPUBLIC
JAMAICA
HAITI
PUERTO RICO
BARBADOS
TRINIDAD AND TOBAGO
PANAMA
VENEZUELA
GUYANA
SURINAM
FRENCH GUIANA
COLOMBIA
ECUADOR
PERU
BRAZIL
BOLIVIA
PARAGUAY
CHILE
ARGENTINA
URUGUAY



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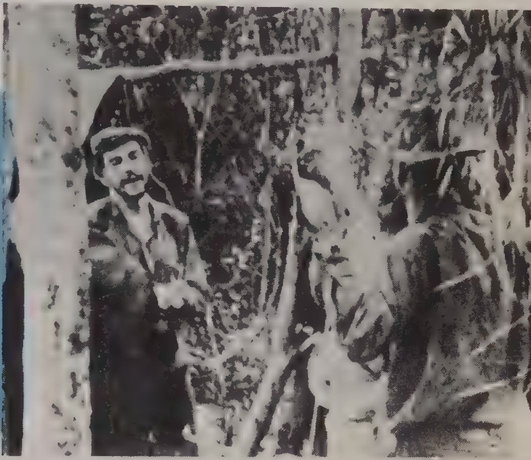
CUBA Soviet Premier Aleksei N. Kosygin ends 4-day state visit in June with a wave at Havana airport. Flanking him are Cuban President Dorticós and Premier Castro (clapping).

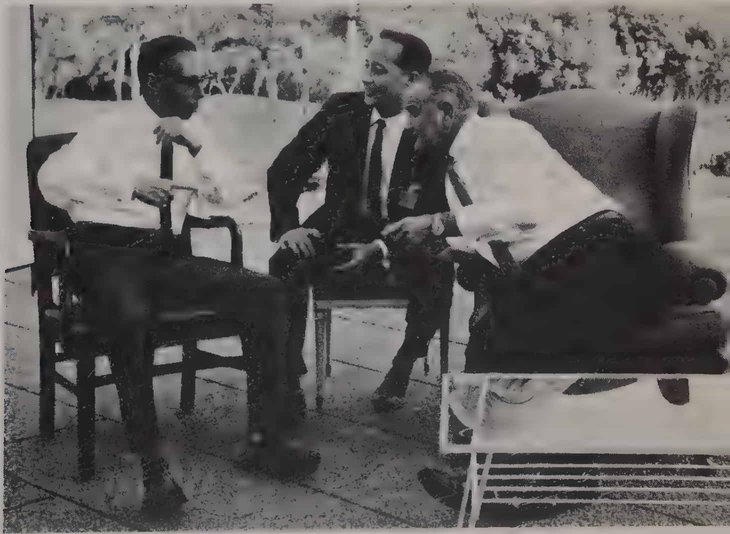


UPI

BOLIVIA Cuban revolutionary Che Guevara regales comrades in picture allegedly taken at a Bolivian hideout a few weeks before his death.

URUGUAY Visiting heads of state Díaz of Mexico (*left*) and Johnson of United States confer privately before summit meeting at Punta del Este. Man in jacket is unidentified.

UPI



countries. None have been successful. Yet it was feared that Castro may have gained a perfect martyr with the death of Guevara, and that the image of Guevara as a pure-hearted Communist Robin Hood might mobilize indigenous guerrilla leaders to more effective action than Cuba's own efforts in exporting revolution. (See also BOLIVIA.)

Inter-American Action. The immediate collective response to the revelation of Cuban involvement in the landing of guerrilla forces in Venezuela was a meeting of delegates from 16 American countries on May 18 to discuss ways of coordinating antiguerrilla tactics. At the request of the Venezuelan government a 5-nation team was appointed by the Organization of American States (OAS) to look into the matter, and on July 26, Venezuela's charge of Cuban subversion was confirmed.

The 12th meeting of consultation of OAS foreign ministers was convened in Washington, D. C., on September 22–24 to recommend necessary action on the Venezuelan affair. The 21 foreign ministers considered the evidence and also were given photographs indicating that Guevara was leading the guerrilla operations in Bolivia. With Mexico abstaining, the meeting approved a nonbinding recommendation that member governments refuse to transport government-owned or financed cargoes in ships that touch at Cuban ports and deny fuel bunkering facilities to them. Non-Communist nations were asked to close their trade and financial contacts with Cuba; the Soviet bloc was alerted that Cuba's attempt to export revolution was a danger to peaceful coexistence; and the OLAS was condemned forcefully. Mexico subscribed to a resolution pledging that the OAS nations would report acts of Cuban subversion to an appropriate UN agency.

STRENGTHENING THE INTER-AMERICAN SYSTEM

Aside from the OAS sessions on Cuban subversion, organs of the OAS and other inter-American groups met frequently in 1967 in an attempt to strengthen inter-American political and economic institutions. The OAS summit meeting at Punta del Este, Uruguay, in April, created a spirit of optimism by outlining plans for a Latin American common market, but this dissipated quickly as economic integration appeared to be a long way from implementation.

OAS Reorganization. Major changes in the 1948 Charter of the Organization of American States were approved by the third Special Inter-American Conference, meeting at Buenos Aires on February 15–22. When ratified by two thirds of the OAS member states, the Charter reforms will make the objectives of the Alliance for Progress the policy of the inter-American system.

Structurally, the quintennial Inter-American Conference will be replaced by an annual General Assembly of Foreign Ministers, and the Inter-American Economic and Social Council (IA-ECOSOC) and the Inter-American Council for Education, Science and Culture (which succeeds the Inter-American Cultural Council) will be raised to a status equal to that of the permanent Council of the OAS. These three councils will function directly under the annual General Assembly. The powers of the OAS secretary-general were enlarged, while his term was reduced from 10 to 5 years.

A basic cleavage between the military-oriented regimes and the constitutionally elected governments was dramatized in a bitter 6-hour debate over a proposal to place the autonomous Inter-American Defense Committee under the direct control of the OAS. Favored by the more democratic representatives as a first step toward the creation of an Inter-American Peace Force, the proposal lost by a vote of 11 to 6, with 3 abstentions.

The OAS Council approved the admission to the OAS of two former British colonies that had become independent in 1966. Trinidad and Tobago joined in February, and Barbados in October. The new admissions brought the total OAS membership to 23.

U. S. Appointees. Covey T. Oliver, a former U. S. ambassador to Colombia, succeeded Lincoln Gordon as assistant secretary of state for Inter-American affairs and U. S. coordinator for the Alliance for Progress on July 1. The frequent changes of occupants of this position have impaired the continuity of policy execution and leadership in hemispheric counsels. In October 1966, Sol M. Linowitz, a millionaire lawyer-industrialist, was appointed U. S. ambassador to the OAS. Linowitz reënergized U. S. concern for social reforms in hemispheric development and pushed for voluntary agreement of the Latin countries to limit purchases of heavy weapons.

Punta del Este Accord. In an effort to revitalize the Alliance for Progress and to reassure the Latin American countries of his administration's commitment to their development, U. S. President Lyndon B. Johnson in January initiated a series of hemispheric meetings that culminated in an agreement to establish a Latin American common market.

The 11th meeting of consultation of OAS foreign ministers held three sessions to prepare the agenda and the final document, which was formally signed at a summit conference of American presidents held at Punta del Este, Uruguay, on April 12–14. The first exploratory session was convened under the auspices of the OAS in Washington, D. C.; the second session of 400 delegates from 20 nations met in Buenos Aires, Argentina, on February 15–27; and the third session, in Montevideo, Uruguay, on April 7–11, put the final touches on the document.

The opening of the summit meeting at Punta del Este was marred by the refusal of the U. S. Senate to underwrite a pledge of $1.5 billion to support the proposed common market and by a 3-day demonstration by students of Montevideo University against the United States. Three chiefs of state were absent: Fidel Castro of Cuba had been ousted from the OAS in 1962; Bolivia's René Barrientos boycotted the meeting because the agenda excluded the question of his landlocked country's access to the sea; and internal unrest prevented Haiti's dictator, François Duvalier, from attending. Nevertheless, an estimated 5,000 people—presidents, aides, accessory personnel, and newsmen—were there.

President Johnson called upon the conferees to declare the next 10 years the "Decade of Urgency." The delegates (with the exception of Ecuador's President Otto Arosemena Gómez, who objected to the proposed measures because they lacked sufficient U. S. aid) signed a 10,000-word "Declaration of the Presidents of America," pledging themselves to create a Latin American common market beginning in 1970. The market, planned to be substantially completed by 1985, would embrace a population of 250 million with a combined gross national product of $75 billion. The declaration also approved work on multinational projects to improve transportation and communications systems, to increase Latin

PRISONER IN BOLIVIA, French Communist Regis Debray answers questions at an August 23 news conference. Charged with entering Bolivia illegally and conspiring to overthrow the government, he was sentenced to 30 years in a Bolivian prison.

UPI

America's share of international trade, to improve living standards, and to limit unnecessary military expenditures.

Impasse on the Common Market. The euphoria that enveloped the summit conference dissipated with unusual speed. The staggering array of obstacles in creating an integrated Latin American economy was evident in the 12th annual session of the UN Economic Commission for Latin America, held in Caracas, Venezuela, on May 4–14. Here the Latin American representatives indicated their reluctance to take the first steps toward a common market, and instead insisted that the United States accord preferential tariffs for Latin exports. There were indeed overwhelming obstacles to the implementation of the common market: poor intraregional communications and transport, unstable currencies, political instability, vested interests in tariff protection, and differing levels of development.

Nevertheless, the 5th annual conference of IA-ECOSOC, at Viña del Mar, Chile (June 15–24), approved an action plan designed to move economic integration ahead on a broad front. Working groups were established, and a meeting was planned to coordinate the two existing trading systems: the Latin American Free Trade Association (LAFTA), representing all 10 South American states and Mexico, and the Central American Common Market (CACM), consisting of Costa Rica, Nicaragua, Honduras, El Salvador, and Guatemala. LAFTA, whose member states account for 90% of the $75 billion Latin American combined gross national product, had increased interzonal trade 86% since its creation in 1960, reducing tariffs on 9,500 items; but LAFTA interzonal trade slumped in 1966, when tariff cutting began to mean real foreign competition for domestic industries. CACM interzonal trade has spurted 300% since 1960, but it represents a diminutive share of Latin American resources and production.

The denouement, at least for the present, regarding the immediate future of the Latin American market came at a meeting of foreign ministers of the LAFTA nations held in Asunción, Paraguay, on August 28–September 3. There the cleavage between the less developed nations and the rest was dramatized by the demand of Paraguay, Ecuador, and Bolivia for broad tariff concessions. The conferees did agree to encourage subregional groupings like that of the five Andean nations (Chile, Peru, Ecuador, Colombia, and Venezuela), which had organized in August 1966, to move ahead more rapidly in their mutual tariff reductions. The five countries bordering on the Rio de la Plata basin likewise were undertaking a $3 million study—financed by the United States, the United Nations, and the OAS—to determine the potential there for integrated development. The Asunción conferees appointed a study commission to determine ways of joining LAFTA and CACM.

Nuclear Ban. A treaty banning nuclear weapons from Central and South America and the Caribbean region was negotiated by 21 Latin American nations in Mexico City on February 12 and signed by 14 of the nations on February 14. This document theoretically creates the first nuclear-free zone in an inhabited area. However, for various reasons, none of the five nuclear powers—the United States, the USSR, Britain, France, and Communist China—were expected to sign protocols guaranteeing the ban.

Mora Successor. Despite the achievement of the nuclear ban and the accord at Punta del Este, progress toward hemispheric cohesion was slow. Dissension in the OAS caused the election of a successor to retiring Secretary-General José A. Mora to go to six ballots. On Feb. 13, 1968, Galo Plaza Lasso, a former president of Ecuador, was elected.

ECONOMIC AND SOCIAL DEVELOPMENT

Parochial nationalism, an exploding population, and frivolous expenditures on military hardware have inhibited economic gains from expanding trade and investment in Latin America. Since World War II, prices of Latin American raw material exports have generally dropped while prices of manufactured imports have risen. Per capita income has risen only 2% annually in the past five years, and capital investment only 3.3%. The foreign debt has tripled in a decade—reaching $12 billion in 1966.

Trade. Latin American export earnings in 1966 climbed 4% above 1965 to reach $10.8 billion. Chilean copper exports and higher copper prices accounted for 30% of the rise. However, the Latin American share of world exports continued to fall: 10.6% in 1950, 7% in 1961, and 6% in 1966.

The increase in export earnings for 1967 was anticipated to be half that of 1966. In part, this was accounted for by the restoration of the world copper market to its pre-boom positions and by the sharp price drop in fish meal, an important Peruvian export. However, Venezuelan oil exports benefited from the Middle East crisis and increased 10%.

The International Coffee Council (ICC) ended a marathon session on September 11 with agreement to renew its 4-year-old treaty. Brazil agreed to cut its share of the export market from 38.5% to 38% in exchange for tighter controls requiring exporting countries to adhere strictly to their quotas.

Latin exports to the United States could benefit from the tariff reductions negotiated by the Kennedy Round of the General Agreement on Tariffs and Trade (GATT), which were to become effective in January 1968. Exports to be so affected include canned beef, canned tuna, and cotton textiles. However, there was some concern that the United States might impose quotas on these reduced-tariff items. (See also INTERNATIONAL TRADE.)

Finance. Total public loans to Latin America reached a record $1.3 billion in 1966, and repayments of loans totaled $570 million. U. S. government agencies, mainly the Agency for International Development (AID) and the Export-Import Bank, provided $766 million. The World Bank disbursed $270 million, and the Inter-American Development Bank (IADB)—the hemisphere's chosen instrument for economic development—lent $205.5 million. The U. S. Congress approved a 20% annual increase for three years for soft loans for the IADB, and Latin American contributions increased proportionately. While the interest charges on the Latin American foreign debt of $10 billion was not as burdensome as in other developing areas, they did represent 15% of export earnings in 1966.

Sol M. Linowitz, U. S. ambassador to the OAS, admonished American businessmen in May that they had a special responsibility in Latin development. U. S. business employed 1.5 million Latin Americans; its investments accounted for 10% of the total Latin American gross national product; it paid 20% of all Latin American taxes; and it was responsible for one third of Latin American exports. While an exaggerated role for U. S. private investment raised old fears of imperialism, the net inflow of $150 million in U. S. private investment in 1966 reversed a trend of withdrawal from the area. The inflow of U. S. private capital was expected to rise to $500 million in 1967.

Successful tax reform in many Latin American countries accounted for a 35% rise in income tax collections between 1961 and 1965 and demonstrated the increasing ability of the governments to mobilize domestic resources for development purposes. Measured in constant prices, income tax revenues increased from $2 billion in 1961 to $2.7 billion in 1965. The area was financing 87% of its gross investment from its own private and public sectors.

The economic growth rate for the Latin American area in 1966 was 3.7%, compared with 5.4% in 1965. This poor performance was heavily influenced by stagnation in Brazil and Argentina. The per capita growth rate has been steadily declining and was at a 15-year low of 1.1% in 1966. This rate was expected to rise to 2.2% in 1967, which is still below the Alliance target of 2.5%.

Military Expenditures. Scarce Latin American resources were being diverted from developmental programs into the purchase, production, or both, of supersonic jets, army tanks, and warships in those countries where the military is powerful. While only 13% of governmental budgets was being spent on arms, this was high when the purpose of the expenditures was to enhance the prestige of the military, encourage enlistments, and produce flashy parades. The United States had refused export licenses for supersonic jets to Latin America and since 1965 had cut military aid 15% (to $65 million). However, when the Latins turned to Europe for their military orders, the United States in October 1967 reversed its policy and permitted the sales. Congress then legislated the termination of massive defense loans to underdeveloped countries by June 1968.

Population Control. The demographic treadmill kept living standards at subsistence levels in most of Latin America. The area, already spending $800 million annually for food imports, will have to double its food production by 1980 if population continues to increase by 2.8% annually. Poverty, religion, ignorance, and nationalistic sentiment that birth control programs are a North American plot to hold thinly populated Latin American nations in check were all serious obstacles to family planning. However, an estimated 1.5 million upper and middle class women were using oral contraceptives, and five governments (Chile, Colombia, Peru, Honduras, and Costa Rica) sponsored population control programs, including the dispensing of intrauterine devices. A three-nation (Argentina, Uruguay, and Chile) $435,000 program, sponsored by the Ford Foundation, was begun on May 4 to train doctors in scientific family planning.

WIDE WORLD

VENEZUELAN GENERALS listen as Defense Minister Florencio Gomez at a news conference, May 12, presents evidence of infiltration of his country by Cuban guerrillas.

Two hemispheric meetings highlighted the importance of population control. The 8th Conference of the International Planned Parenthood Federation, attended by official and private delegations from 87 countries, met in Santiago, Chile, on April 9–15 for a review of world population problems and progress in birth control. The OAS convened its first Inter-American meeting on population policies, in Caracas, Venezuela, on September 11–16, with 16 nations represented. The conference recommended major programs in family planning.

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LATIN AMERICAN LITERATURE

The most important literary news of 1966–67 in Latin America was the awarding of the Nobel Prize for literature to Miguel Angel Asturias, the Guatemalan novelist. Asturias, like his contemporaries Jorge Luis Borges of Argentina and Pablo Neruda of Chile, had been a serious candidate on previous occasions. His selection in 1967 was widely praised by the Latin American intelligentsia, who felt that it made up, at least in part, for the apparent ignorance abroad of Latin American writers of stature.

Asturias is best known for *El señor presidente* (1946)—a nightmarish denunciation of dictatorship—and also for his attacks on U. S. economic imperialism within his country. He has also written moving poetic epics on Indian traditions of myth and folklore. (See also NOBEL PRIZES.)

The centenary of the birth of Rubén Darío, the internationally famous Nicaraguan poet, was celebrated at festivals throughout Latin America, and a number of works on Darío were published.

Novels. Another newsworthy award in 1966–67 was the Venezuelan government's Rómulo Gallegos Prize, granted for the best novel of the years 1964–66 to *La casa verde* by Mario Vargas Llosa of Peru. *La casa verde,* a remarkable evocation of provincial life, also received the Spanish Premio de Crítica award as the best novel of 1966.

David Viñas of Argentina received the Casa de las Américas prize for *Los hombres de a caballo,* a timely exploration of the role of the Argentine military in national history. Marco Denevi, also of Argentina, published *Un penqueño café,* a study of the psychological effects of bureaucracy.

Much of the best Latin American writing is being done in Mexico. Vicente Leñero published a revised edition of his 1961 *La voz adolorida.* Although the novel has gone through several editions in other countries, it has not been a popular success in Mexico. Leñero's popularity in his own country may be changed by his new novel, *El garabato,* a complex work that creates the illusion of several novels within a novel.

Carlos Fuentes' *La zona sagrada* is of interest for its stylistic mastery. In Fuentes' other new novel, *Cambio de piel,* which was awarded the 1967 Seix Baral prize, he returned to the interplay between traditionalism and cosmopolitanism that fascinated him in earlier works. Fernando del Paso finally published his long-awaited "underground" novel, *José Trigo,* in late 1966. Critical reaction to the book—which was awarded the Villaurrutia prize for the best work by a young novelist in 1966—was generally highly favorable, and some enthusiasts compared it to James Joyce's *Ulysses* in style and structure. Another young Mexican writer rapidly gaining a fine reputation is Raúl Nabarrete, whose recent novel *Aquí, allá, en esos lugares* attracted a great deal of critical attention.

Critical controversy in Mexico has centered on the group of young authors cited above, as well as on José Augustín and other young writers, whose work is either denounced as amateurish or hailed as representative of the mature Mexican novel.

Short Stories. Noteworthy collections of short stories published in 1966–67 include *Tute de Reyes,* by Antonio Benítez of Cuba, *Pasos y pasajes,* by the Venezuelan novelist Arturo Uslar Pietri, and *Las fuentes legendarias,* a work of lyric richness by the Mexican poet Marco Antonio Montes de Oca.

Criticism. *Puertas al campo,* by Octavio Paz of Mexico—a collection of essays and reviews—again revealed Paz as an extremely perceptive and sensitive critic. Pedro Díaz Seijas' *La antigua y la moderna literatura venezolana* marked a significant step toward the rewriting of Latin American literary history in view of the contemporary flourishing of the literature.

Poetry. Mexico's National Prize for Literature for 1966 went to Jaime Torres Bodet. Although primarily awarded for Torres Bodet's criticism, it also honored his poetry. Octavio Paz published *Verindaban,* which continued his exploration of the meaning of individual being. The Casa de las Américas award for poetry went to a young Spaniard, Félix Grande Lara, for *Blanco spirituals,* a lyric work written in the vein of revolt widespread among younger poets.

Venezuela's National Prize for Literature was awarded to Fernando Paz Castillo for *Poesías.* Another Venezuelan, Antonio Arráiz, who is known outside of his own country chiefly as a novelist, published the collection *Suma poética.*

Theater. Theatrical controversy in 1966–67 centered on Pablo Neruda's *Fulgor y muerte de Joaquín,* an anti-American diatribe based on the life of the 19th century California patriot-bandit Joaquín Murieta. Neruda publicly disowned the play because of the director's alterations, which presumably involved the play's political tone. Neruda's disclaimer, coming on the heels of a denunciation by Cuban intellectuals of Neruda's attendance at the 1966 PEN Club meeting of authors in New York, added another enigma to the many surrounding one of Latin America's most noted Communists and greatest artists.

Not unexpectedly, Emilio Carballido's *Yo también hablo de la rosa* received the Ruiz de Alarcón prize as the best Mexican play of 1966. The Casa de las Américas prize for drama was awarded to Dalmiro Sáenz of Argentina for *Hip . . . hip . . . ufa!,* which displays Sáenz's fertile imagination but also his lack of discipline. *La noche de los asesinos,* by José Triana of Cuba, was well-received in Cuba, Mexico, and Paris.

Translations. Important translations included Germán Arciniegas' *Latin America: A Cultural History,* tr. by Joan MacLean; Miguel Angel Asturias' *Mulatto Woman,* tr. by Gregory Rabassa; Asturias' *El señor presidente,* tr. by Frances Partridge, 2d ed.; Jorge Luis Borges' *A Personal Anthology,* ed. by Anthony Kerrigan; Garcilaso de la Vega's *Royal Commentaries of the Incas and General History of Peru,* tr. and introd. by Harold Livermore, foreword by Arnold Toynbee; and Pablo Neruda's *The Heights of Machu Picchu,* tr. by Nathaniel Tarn.

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LATTER-DAY SAINTS. See CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS.

LAW

This article reviews certain important decisions of the U. S. Supreme Court handed down during the 1966–67 term in the following areas: antitrust, transportation and public utilities, taxation, criminal law, labor law, racial discrimination, freedom of speech and press, voting rights, citizenship, subversive activity, and negligence.

Business Regulation; Antitrust Laws. In *Federal Trade Commission* v. *Procter & Gamble Co.* (386 U. S. 568), the Supreme Court decided that the acquisition by Procter & Gamble, a large diversified manufacturer of household products, of the assets of Clorox Chemical Co., the leading manufacturer of household liquid bleach, might have substantial anticompetitive effects, and thus violated paragraph 7 of the Clayton Act. In *United States* v. *Sealy, Inc.* (388 U. S. 350), it was held that territorial allocations—under which Sealy agreed with each of its licensees not to license anyone else to manufacture or sell its branded mattresses and bedding products in a designated area, and each licensee agreed not to manufacture or sell Sealy products outside that area—were part of the unlawful price-fixing and policing activities of Sealy operating as an instrumentality of its licensees (who owned substantially all of its stock and controlled its operations). This constituted "an aggregation of trade restraints" illegal *per se* under paragraph 1 of the Sherman Act.

In *Abbott Laboratories* v. *Gardner* (387 U. S. 136) and *Gardner* v. *Toilet Goods Association* (387 U. S. 167), the court held that several regulations of the commissioner of food and drugs, designed to implement the Federal Food, Drug, and Cosmetics Act, could be reviewed by the courts prior to enforcement by the agency, where the issues presented were appropriate for judicial determination and the impact of the regulations on the industry was direct and immediate. An opposite result was reached in *Toilet Goods Association, Inc.* v. *Gardner* (387 U. S. 158), on grounds that the regulation at issue would not affect the primary conduct of the petitioners' business and only minimal, if any, adverse consequences would face them if they challenged the regulation.

In *Securities and Exchange Commission* v. *United Benefit Life Ins. Co.* (387 U. S. 202), the court held that a contract offered by an insurance company in competition with mutual funds, on the basis of "growth" through sound investment management of common stocks (under which the company assumed investment risk by its guarantee of cash value based on net premiums) was subject to the registration requirements of the Securities Act of 1933 and did not come within the insurance exemption of paragraph 3(a) of that act.

Transportation and Public Utilities. In *Levin* v. *Mississippi River Fuel Corp.* (386 U. S. 162), the court decided that the holders of the Class B stock of Missouri Pacific Railroad (MoPac) were entitled to vote separately, as a class, on the proposed plan of consolidation of MoPac with Texas & Pacific Railway. Its decision was based on a provision of Missouri law applicable to mergers, which was held to require the application of MoPac's articles of association, requiring the assent of the majority of the shareholders on a separate-class vote basis.

Baltimore & Ohio Railroad Co. v. *United States* (386 U. S. 372) involved the rights of three smaller carriers, designated as "protected railroads," in connection with the merger of the Pennsylvania and New York Central railroads. The court held that the Interstate Commerce Commission erred in withdrawing a revenue indemnification provision for the "protected railroads" and permitting the immediate consummation of the merger without determining the smaller railroads' ultimate fate.

Where the Railway Express Agency applied to the Interstate Commerce Commision for permission to sell 500,000 authorized but unissued shares (20%) of its stock to Greyhound Corporation, the court decided that, under paragraph 20(a) of the Interstate Commerce Act, the commission must hold a hearing and must consider competitive factors. It also ruled that if a lessening of competition was found or threatened within the meaning of paragraph 7 of the Clayton Act, the stock issuance must be disapproved (*Denver & Rio Grande Western Railroad Co.* v. *United States*, 387 U. S. 485). In *American Trucking Associations* v. *Atchison, Topeka & Santa Fe Railway Co.* (387 U. S. 397), it was held that the Interstate Commerce Commission, by mandate of the National Transportation Policy, had authority to issue rules requiring railroads offering trailer-on-flatcar ("piggyback") service through open-tariff publications to make such service available to all other persons at the same charge, including motor and water carriers.

In *Railroad Transfer Service* v. *Chicago* (386 U. S. 351), the court held invalid a complicated licensing system imposed by the city of Chicago on a motor carrier transporting passengers between rail terminals in Chicago. It ruled that this reserved to the city a power that the Interstate Commerce Act gave to the railroads and imposed requirements the total effect of which was to burden interstate commerce. In *Udall* v. *Federal Power Commission* (387 U. S. 428), the court, in determining whether private power companies should be licensed to construct hydroelectric power plants on the Snake River, decided that the commission must take into consideration not only hydroelectric power, navigation, and flood control, but also the recreational purposes served by the river, and must explore other issues relevant to the public interest. The case was remanded to the commission for further proceedings.

Taxation. In *Northeastern National Bank* v. *United States* (387 U. S. 213), the court decided that, where it was possible by the use of a reasonable future rate of return to determine the amount of the *corpus* (fund) required to produce a fixed monthly income for a widow under the terms of a testamentary trust, the bequest in trust could qualify for the estate tax marital deduction of up to one half the value of the estate. (The Internal Revenue Code allows this with respect to an interest in which a surviving spouse is entitled for life to all the income from a "specific portion" of the trust property.) In another federal estate tax case, the court held that, where federal tax liability turned on the character of a property interest held and transferred by the decedent under state law, federal authorities were not bound by the determination made of such property interest by a state trial court. It also ruled that in the absence of a decision by the state's highest court, federal authorities must apply what they found to be the state law after giving proper regard to relevant rulings of other courts of the state (*Commissioner* v. *Estate of Bosch*, 387 U. S. 456).

In *Commissioner* v. *Stidger* (386 U. S. 287), it was decided that a military officer could not deduct, as "traveling expenses . . . while away from home," his expenditures for meals while stationed at a permanent duty post to which his dependents were prohibited from accompanying him. In *National Bellas Hess, Inc.* v. *Department of Revenue of the State of Illinois* (386 U. S. 753), it was held that the commerce clause prohibited the State of Illinois from imposing the duty of use tax collection and payment upon a seller who owned no tangible property in the state, had no sales outlets, representatives, telephone listing or solicitors there, did not advertise there, and whose only connection with customers in the state was by common carrier and by mail.

Criminal Law. *Spencer* v. *Texas* (385 U. S. 554) dealt with the procedure under the state's recidivist or habitual criminal statute, whereby the jury trying a pending criminal case was fully informed of a defendant's past convictions for sentencing purposes, but was also charged by the court that such matters were not to be considered in assessing the defendant's guilt or innocence. The court ruled that this did not violate the due process clause of the 14th Amendment. In *Whitus* v. *Georgia* (385 U. S. 545), the court decided that the selection of prospective grand jurors and petit jurors on the basis of a segregated tax digest, an old jury list previously condemned by a federal court of appeals as illegal, and the personal acquaintances of the jury commissioners in their respective communities violated the rights of criminal defendants under the equal protection clause of the 14th Amendment.

In *Chapman v. California* (386 U.S. 18), it was held that the "harmless error" rule was inapplicable where a prosecutor extensively commented on the failure of murder defendants to testify and the trial judge charged the jury that it could thus draw adverse inferences. The judgments of conviction were reversed on the ground that the defendant's federal rights under the 5th and 14th Amendments had been violated. In *Specht* v. *Patterson* (386 U. S. 605), it was held that the Colorado Sex Offenders Act violated the due process clause of the 14th Amendment by providing that a person convicted of specified sex offenses could be given an indeterminate sentence on the basis of a psychiatric examination and a report to the trial judge. The defendant must have opportunity for a hearing, representation by counsel, confrontation of witnesses, and cross-examination.

The Arizona Juvenile Code, under which a child could be charged as a delinquent and confined in a state institution, was held to violate the due process clause of the 14th Amendment for failing to provide adequately for notice of hearings, right to counsel, right of confrontation and cross-examination of witnesses, and exercise of privilege against self-incrimination (*In re Gault,* 387 U. S. 1).

Washington v. *Texas* (388 U. S. 14) concerned the right of a defendant in a criminal case, under the 6th Amendment, to have compulsory process for obtaining witnesses in his favor. The court held that this right was applicable to the states through the 14th Amendment, and that such right was violated by a state procedural statute providing that persons charged as principals, accomplices, or accessories in the same crime could not be witnesses for each other. In *United States* v. *Wade* (388 U. S. 218), it was held that the 6th Amendment guaranteed an accused the right to counsel at a postindictment lineup, which the court determined to be a critical stage of the prosecution. Nevertheless, the lineup did not violate the accused's privilege against self-incrimination under the 5th Amendment.

In *Stovall* v. *Denno* (388 U. S. 293), the court decided that the constitutional rule established in the *Wade* and *Gilbert* cases (*above*) applied only to cases of confrontations for identification purposes conducted in the absence of counsel after the announcement dates of those decisions.

In *Klopfer* v. *North Carolina* (386 U. S. 213), the court ruled that, by use of a procedural device indefinitely postponing prosecution on an indictment over defendant's objection and without stated justification, the state denied him the right to a speedy trial guaranteed by the 6th and 14th Amendments.

In *Cooper* v. *California* (386 U. S. 58), it was held that the search by police of a car belonging to a suspected narcotics violator, one week after his arrest, did not violate the unreasonable search and seizure provisions of the 4th Amendment. The court decided that the arrest without a warrant of a narcotics suspect, who was pointed out to police by an informant reasonably believed by them to be reliable, did not violate the search and seizure provisions of the 4th Amendment, the due process clause of the 14th Amendment, or the confrontation and cross-examination provisions of the 6th Amendment —even though a state court refused to require disclosure of the informant's identity at a pretrial hearing held for the purpose of determining only the question of probable cause for arrest and search (*McCray* v. *Illinois,* 386 U. S. 300).

In *Berger* v. *New York* (388 U. S. 41), it was held that a state statute, which in broad terms permitted eavesdropping by the installation of a recording device in an attorney's office for several months, resulted in a trespassory intrusion into a constitutionally protected area and so violated the unreasonable search and seizure provisions of the 4th Amendment. In *Camara* v. *Municipal Court of San Francisco* (387 U. S. 523), the court decided that the 4th Amendment barred prosecution of a person who refused to permit a code-enforcement inspection of his personal residence without a warrant. The same rule applied to inspections of commercial structures, in *See* v. *City of Seattle* (387 U. S. 541).

In *Garrity* v. *New Jersey* (385 U. S. 493), it was held that the threat of removal from public office under the state's forfeiture-of-office statute rendered the resulting statements involuntary and therefore inadmissible in subsequent state criminal proceedings. (The statute in question provided that an employee should be removed from office if he refused to testify or answer any material question before any competent commission on the ground that his answer might incriminate him.) In a similar case, the court reversed the holding of the New York Court of Appeals that a lawyer could be disbarred for failure to produce demanded financial records and for refusal to testify at a judicial hearing, where the lawyer defended the disbarment proceeding on the ground that the production of the records and his testimony would tend to incriminate him (*Spevack* v. *Klein,* 385 U. S. 511).

In *Walker* v. *City of Birmingham* (388 U. S. 307), the court held that participants in demonstrations, mass street parades, and picketing could not bypass orderly judicial review of a temporary injunction against such actions before disobeying the injunction, and upheld the convictions of the participants. In *United States* v. *Laub* (385 U. S. 475), the court decided that recruiting and arranging the travel to Cuba of 58 U. S. citizens whose passports, although otherwise valid, were not specifically validated for travel to that country, did not constitute an indictable offense under the Immigration and Nationality Act of 1952. This law prohibits citizens, during war or national emergency proclaimed by the president, from departing or entering the United States without valid passports.

Labor Law. In *National Labor Relations Board* v. *C & C Plywood Corp.* (385 U. S. 421), the court upheld the board's finding that an employer who inaugurated a premium pay plan during the term of a collective bargaining agreement without prior consultation with the union representing its employees was guilty of an unfair labor practice in violation of the National Labor Relations Act. In *National Labor Relations Board* v. *Acme Industrial Co.* (385 U. S. 432), the court held that the refusal of an employer to furnish information that would allow a union to decide whether to process a grievance constituted an unfair labor practice, in violation of the National Labor Relations Act; and thus the board could issue a cease-and-desist order.

A provision in the collective bargaining agreement for compulsory and binding arbitration was ruled not to preclude the board from finding an unfair labor practice by the employer if he refused to furnish the union with information necessary for the proper performance of its duties. In *National Labor Relations Board* v. *Great Dane Trailers, Inc.* (388 U. S. 26), it was held that discriminatory conduct by an employer with respect to the granting of vacation pay as between strikers and nonstrikers violated the labor act, that such conduct carried a potential for adverse effect on employee rights, and that no evidence of legitimate and substantial business justification was shown to the board.

In *National Labor Relations Board* v. *Allis-Chalmers Mfg. Co.* (388 U. S. 175), the court upheld the imposition of fines by a union on some of its members who crossed picket lines and worked during strikes, deciding that the union's conduct did not violate the prohibition against restraint or coercion of employees provided in the labor act. *National Woodwork Manufacturers Association* v. *National Labor Relations Board* (386 U. S. 612) dealt with a collective bargaining contract in which it was agreed that union members would not handle premachined doors. The court held that this was designed to preserve work traditionally performed by jobsite carpenters and that therefore the maintenance of this provision of the contract did not violate the labor act, which made it unfair labor practices to (1) enter into an agreement that an employer would refrain from handling the products of another employer, and (2) to force a person to cease using the products of another manufacturer. (See also LABOR.)

Racial Discrimination. In *Reitman* v. *Mulkey* (387 U. S. 369), the court agreed with the California supreme court that a state constitutional provision (added pursuant to an initiative and referendum in 1964) would significantly involve the state in private discriminations. The provision in question did not merely repeal existing law forbidding private racial discrimination but authorized racial discrimination in the housing market and established the right to discriminate as a basic state policy. It was therefore held to be invalid under the equal protection clause of the 14th Amendment. In *Loving* v. *Virginia* (388 U. S. 1), the court decided that the state's statutory scheme to prevent marriages between persons solely on the basis of racial classifications violated the 14th Amendment.

Freedom of Speech and Press. *Time, Inc.,* v. *Hill* (385 U. S. 374) involved a conflict between an individual's right of privacy, protected by a New York state statute, and the freedom of the press. *Life* magazine published an article which inaccurately indicated that a certain Broadway stage play was based on an incident during which Hill and his family were held hostage by three escaped convicts in their home. Reversing and remanding for further proceedings the judgments of the state courts awarding damages to Hill, the court held that the constitutional protections for speech and press precluded the application of the state statute to redress false reports of matters of public interest without proof that the defendant published such a report with knowledge of its falsity, or in reckless disregard of the truth.

In *Curtis Publishing Co.* v. *Butts* (388 U. S. 130), the court decided a case involving libel by the press against the athletic director of the University of Georgia (who was not a state employee). The court held that a "public figure" who was not a public official could recover damages for defamatory falsehood substantially endangering his reputation, if this was shown to be highly unreasonable conduct by a publisher, an extreme departure from ordinary standards of responsible investigation and reporting.

Voting Rights. In *Swann* v. *Adams* (385 U. S. 440), the court invalidated a plan for reapportionment of the Florida legislature in accordance with the "one man, one vote" mandate of *Reynolds* v. *Sims* (377 U. S. 533) in 1964. Recognizing that mathematical exactness is not required in state apportionment plans, the court nevertheless refused to accept variations of 30% among Senate districts and 40% among House districts, in the absence of a satisfactory explanation grounded on acceptable state policy. In *Kilgarlin* v. *Hill* (386 U. S. 120), the court held that population variances among some districts in Texas, in a reapportionment of the state legislature resulting in a 1.31 to 1 ratio between the largest and smallest districts, required the federal district court to conduct further proceedings to determine whether the state policy of respecting county lines wherever possible justified the range of deviations that was evident.

In *Sailors* v. *Board of Education of Kent County* (387 U. S. 105), the court decided that nonlegislative state or local officials, such as members of county school boards, could be chosen otherwise than by election (in this case, by a combination of the elective and appointive systems), and that the principle of "one man, one vote" had no relevancy where no election was involved or required for such nonlegislative offices.

Miscellaneous. In *Berenyi* v. *Immigration Director* (385 U. S. 630), the court upheld the denial of a petition for naturalization of an alien who falsely denied under oath his former membership in the Communist party. It ruled that the "meaningful association" test for party membership used in deportation cases was inapplicable, since petitioner's application was not denied for party membership but for falsely answering a relevant question.

In *Afroyim* v. *Rusk* (387 U. S. 253), it was held that Congress lacked the power to strip a naturalized citizen of his citizenship for voting in a foreign political election and, therefore, that paragraph 401(e) of the Nationality Act of 1940 was unconstitutional because it conflicted with the provision of the 14th Amendment that "All persons born or naturalized in the United States . . . are citizens . . ."

In *Boutilier* v. *Immigration and Naturalization Service* (387 U. S. 118), it was held that an alien who at the time of entry into the United States was a homosexual would be excludable under paragraph 212 (a)(4) of the Immigration and Nationality Act of 1952 as "afflicted with psychopathic personality." The court found that such a term was not void for vagueness and was, therefore, not repugnant to the 14th Amendment.

In *Keyishian* v. *Board of Regents* (385 U. S. 589), the court decided that the continued employment of state university employees could not depend on their compliance with a state plan, formulated partly in statutes and partly in administrative regulations, which the state used to prevent appointment or retention of "subversive" persons in state employment. The court ruled that the state plan was unconstitutionally vague and interfered unduly with exercise of rights under the 1st Amendment. Included in the court's condemnation were statutory provisions making Communist party membership, *per se prima facie* evidence of disqualification for employment in the state's public school system.

In *Waldron* v. *Moore-McCormack Lines, Inc.* (386 U. S. 724), it was ruled that an injured seaman was entitled to have presented to the jury his theory that a vessel on which he worked was "unseaworthy" because too few crewmen were assigned to perform a specific task in a safe and prudent manner. In *Jackson* v. *Lykes Bros. Steamship Co.* (386 U. S. 731), the court decided that a longshoreman's widow was entitled to damages if her husband's death was caused by the negligence of the owner of the ship on which he was employed or by the ship's unseaworthiness. It thus rejected the contention that paragraph 5 of the Longshoremen's and Harbor Workers' Compensation Act provided the exclusive remedy.

(See also CIVIL RIGHTS.)

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UPI

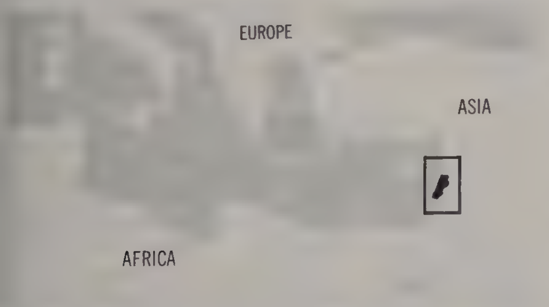
ANTI-AMERICAN DEMONSTRATORS in Beirut, Lebanon, burn a refreshment stand soon after the Israeli-Arab war in June. Arabs charged the United States with aiding Israel.

LEBANON

Lebanon in 1967 suffered from the pressures of inter-Arab rivalries, economic dislocation, and war, but the country avoided internal political crises. Premier Rashid Karami, who assumed office on Dec. 7, 1966, held power throughout the year. His government adopted a neutral stance amid the clashing political and economic interests of the Arab states; surmounted a domestic financial crisis brought on by the failure in 1966 of the Intra Bank; and guided the country through a limited participation in the Israeli-Arab war.

Inter-Arab Relations. At the begining of 1967 the Arab world seemed deeply divided between the traditionalist states, led by Saudi Arabia, and the radical or revolutionary countries, headed by the United Arab Republic. Lebanon tried to avoid involvement in this schism. Following a visit to Kuwait by Presi-

LEBANON • Information Highlights



Area: 4,015 square miles (10,400 sq km).
Population: 2,460,000 (mid-1966 UN est.).
Chief City (1964 est.): Beirut, the capital, 700,000.
Government: *President*—Charles Helou (took office Sept. 23, 1964); *Premier*—Rashid Karami (took office Dec. 7, 1966). *Parliament*—Chamber of Deputies, 99 members (party seating 1967, by religious apportionment: Maronite Christian, 30; Sunnite Muslim, 20; Shiite Muslim, 19; Greek Orthodox, 11; Greek Catholic, 6; Druze, 6; Armenian Orthodox, 4; others, 3).
Religious Faiths: Christians, 50% of pop., Muslims, 34%.
Education: *Literacy rate,* 85% of population. *Total school enrollment* (1964)—432,742 (primary, 334,903; secondary, 77,677; teacher-training, 1,554; technical, 1,256; higher, 17,352).
Finance (1966 est.): *Revenues,* $164,000,000; *expenditures,* $190,460,000; *monetary unit,* Lebanese pound (3.17 pounds equal U. S.$1).
Gross National Product (1965): $1,120,000,000.
Cost of Living Index (1963): 110 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,094,400; olive oil, 6,000; wine (1965), 4,000.
Crops (metric tons, 1965): Citrus fruit, 250,000; apples, 115,000; grapes (1966), 76,000; wheat (1966), 70,000.
Minerals (metric tons, 1965): Lime, 39,908; salt, 24,000.
Foreign Trade (1965): *Exports,* $85,377,000 (chief exports: dried beans, $7,014,000; non-citrus fruit, $6,767,000; oranges and tangerines, $4,108,000; iron and steel manufactures, $3,867,000); *imports,* $481,757,000 (chief imports: automobiles, $29,213,000; live animals, $28,460,000; grain, $22,710,000). *Chief trading partners* (1965): France (took 3% of exports, supplied 14% of imports); Britain (took 5% of exports, supplied 13% of imports).
Transportation: *Roads* (1966), 4,660 miles (7,498 km); *motor vehicles* (1965), 112,693 (automobiles, 98,715); *railways* (1964), 208 miles (335 km); *merchant vessels* (1966), 134; (672,000 gross registered tons); *national airlines,* Air Liban, Lebanese International Airways, Trans-Mediterranean Airways, Lebanese Air Transport; *principal airport,* Beirut.
Communications: *Telephones* (1966): 105,000; *television stations* (1965), 8; *television sets* (1965), 130,000; *radios* (1964), 275,000; *newspapers* (1965), 37.

dent Charles Helou of Lebanon, the Lebanese position was summed up in a joint communiqué on February 14, which announced the two countries' intention of maintaining neutrality regarding differences among the other Arab states.

Israeli-Arab War. As tension between Israel, on the one hand, and Syria and the United Arab Republic, on the other, reached a crisis in late May and early June, inter-Arab antagonisms were forgotten in the need to present a common front. When war broke out between Israel and the UAR on June 5, the Lebanese government declared a state of national emergency and prepared to support the UAR, Jordan, and Syria. Lebanon's only participation in the military struggle, however, was a brief air foray over Israel. When the UAR accused the United States and Britain of assisting Israel, Lebanon withdrew its chief representatives from Washington and London and on June 8 forced a temporary recall of the U. S. and British ambassadors from Lebanon.

Aftermath of the War. Lebanon joined the other Arab states in demanding, before the UN Security Council and in a special session of the General Assembly on June 17–July 21, that Israel be branded an aggressor and be required to evacuate all occupied territory. When the United Nations failed to take these actions as requested, Lebanon, like Israel's other Arab neighbors, refused to accede to Israeli insistence on direct negotiations for a permanent peace settlement.

Economy. The Lebanese economy still suffered in 1967 from the failure on Oct. 15, 1966, of the Intra Bank, one of the Middle East's largest financial institutions. On Oct. 11, 1967, the reorganization of the bank was announced under a plan devised by Kidder, Peabody and Company of New York. In the new Intra corporation, Kuwait held 34% of the capital stock, the United States (through the Commodity Credit Corporation), 17%, and the Lebanese government, 14%. This arrangement marked a dramatic return of United States influence to Lebanon after the loss of American prestige that accompanied the Israeli-Arab war.

The Lebanese economy was also adversely affected in 1967 by stoppages in the normal flow of petroleum to Lebanese refineries and ports. The pipeline from Iraq was closed from Dec. 13, 1966, to Mar. 2, 1967, by the Syrian government in a dispute with the Iraq Petroleum Company over transit fees. On June 6, as a result of the war, this pipeline was again shut down for a time, as was the line from Saudi Arabia to Lebanon.

Lebanon, however, recouped some of its losses in oil revenues by sharing in the benefits arising from the settlement of the Syrian dispute with the Iraq Petroleum Company. In a new contract with IPC announced on March 31, Lebanon secured a 58% increase in payments for petroleum transit and loading rights, retroactive to Jan. 1, 1966.

The Israeli-Arab crisis and war dealt additional blows to the Lebanese economy. There was a serious flight of liquid capital from the country, tourism was virtually ended at the height of the summer season, and Lebanon's transit trade with the neighboring Arab states was disrupted. The recovery of the economy from its multiple dislocations, although relatively rapid, was still incomplete at the end of the year.

PAUL L. HANNA
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LESOTHO

Friction between king and prime minister, a large diamond find that made world headlines, and cooperation with South Africa highlighted the year 1967 in Lesotho.

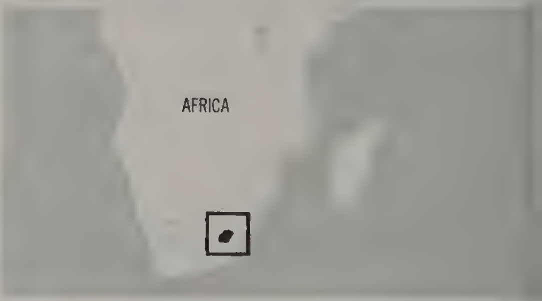
Post-Independence Conflict. During Lesotho's first year of independence (ending Oct. 4, 1967), relations remained strained between Prime Minister Leabua Jonathan, whose moderately conservative Basutoland National party has a narrow majority in Parliament, and King Motlotheli Moshoeshoe II, who claimed that Jonathan was restricting his role as Lesotho's national leader. This power struggle between the hereditary King and the Prime Minister resulted in riots and the arrest of the King on Dec. 27, 1966.

On January 5, King Moshoeshoe signed a document providing for his automatic abdication if he should attempt to assume powers not granted him by the constitution, and he was released the following day. Several leaders of the opposition Basutoland Congress party, found guilty of inciting the riots, were given suspended sentences on July 14.

Large Diamond Find. On May 26, Ernestine Ramoboa found a large diamond on the small claim of her husband, Petrus Ramoboa, in the northeastern mountain village of Letseng-la-Draai. Diggers in the village average 25 to 30 cents a day for tiny diamonds the size of a grain of rice. Lacking money for fare, Ramoboa hitchhiked 110 miles to the diamond buyers' market in Maseru. Word of his find quickly reached the government, whose protection enabled Ramoboa to receive $302,400, half of which he kept as principal owner of the claim.

The 601-carat diamond, the seventh largest diamond ever found and the largest uncut diamond in

LESOTHO • Information Highlights



Area: 11,716 square miles (30,344 sq km).
Population: 865,000 (July 1, 1966 est.).
Chief City (1966 census): Maseru, the capital, 14,000.
Government: *King*—Motlotlehi Moshoeshoe II (installed March 12, 1960); *Prime Minister*—Chief Leabua Jonathan (took office April 1965). *Parliament*—House of Representatives, 60 members (party seating, 1967: Basutoland National party, 31; Basutoland Congress party, 25; Marematlou Freedom party, 4); Senate, 33 members.
Religious Faiths: Roman Catholics, 41% of population; other Christians, 30%; others, 29%.
Education: *Literacy rate*, 85% of population. *Total school enrollment* (1964)—169,195 (primary, 165,036; secondary, 2,752; teacher-training, 574; technical, 645; higher, 188).
Finance (1966–67 est.): *Revenues*, $13,500,000; *expenditures*, $13,500,000; *monetary unit*, rand (0.7143 rand equals U. S. $1).
Chief Crops: Corn, peas, wheat, maize, barley, beans.
Minerals (1965): Diamonds, 7,341 carats.
Foreign Trade (1966): *Exports*, $6,100,000; *imports*, $32,100,000. *Chief trading partner:* South Africa.
Transportation: *Roads* (1964), 931 miles (1,498 km); *motor vehicles* (1964), 2,100 (automobiles, 1,800); *principal airport*, Maseru.

existence, was resold several times before its purchase for $649,600 by New York jeweler Harry Winston. Winston, who will cut the gem into stones worth over $1 million, sponsored a trip to New York by the Ramoboas in November.

Relations with South Africa. On May 1, Prime Minister Jonathan reaffirmed his country's peaceful coexistence with South Africa, which surrounds Lesotho and upon which Lesotho is economically dependent. He also agreed to allow one-way passage of South African refugees going to Zambia.

FRANKLIN PARKER
University of Oklahoma

LIBERIA

William V. S. Tubman was again reelected president of Liberia in 1967 and was able to ease the security measures he had taken the previous year. The labor unrest that had racked the country in 1966 was brought to an end.

Internal Affairs. On February 21, the 31st national convention of the True Whig party (Liberia's only political party) renominated President Tubman and Vice President William R. Tolbert as its candidates for the forthcoming elections. Running unopposed, President Tubman and Vice President Tolbert were reelected on May 2—the President to serve his sixth consecutive term and the Vice President his fifth. Vice-President Hubert Humphrey attended the inauguration ceremonies on Jan. 1, 1968. The full slate of True Whig party candidates was elected to fill the enlarged, 52-member House of Representatives, which had eight new seats created for hinterland constituencies previously unrepresented in the legislature.

Labor unrest in the Firestone rubber plantations had produced a tense situation following the arrest of James Bass, the leader of the Congress of Industrial Organizations, in November 1966 and a 3-day strike by rubber workers the next month. The situation was finally improved when Bass was released on February 22. International attention had been drawn to the government's handling of the labor problem. Two international trade union organizations lodged formal complaints with the International Labor Office in February. In the same month Aston King, editor of the Monrovia newspaper *Liberian Age*, was released after nine months in prison on charges of sedition.

NEW YORK TIMES

ENORMOUS UNCUT DIAMOND is shown reporters in New York City by Mrs. Ernestine Ramoboa of Lesotho, who found the stone on the small claim of her husband, Petrus (*right*).

In what Liberian newspapers termed "the wedding of the century," President Tubman's daughter, Wilhelmina, was married to Gabriel J. Tucker, undersecretary of public works.

Economic Affairs. The 1967 budget, balanced at $50 million, was the largest in Liberia's history. In January, President Tubman officially opened the Mount Coffee hydroelectric power project, a $27 million development funded by the U. S. Agency for International Development (AID).

During the year the government announced that Liberia had become the world's largest maritime nation, with 21,502,000 gross tons under its flag. Most of the ships involved are owned by U. S. and Greek interests.

Foreign Affairs. In 1967 the Liberian government played a key role in mediating a dispute between Guinea and the Ivory Coast. Liberia also agreed in September to join a 6-member commission of the Organization of African Unity to try to mediate an end to the Nigerian civil war.

VICTOR T. LE VINE
Washington University, St. Louis, Mo.

LIBERIA • Information Highlights

Area: 43,000 square miles (111,369 sq km).
Population: 1,090,000 (July 1, 1966 est.).
Chief City (1962 census): Monrovia, the capital, 80,992.
Government: *President*—William V. S. Tubman (took office Jan. 1, 1944); *Vice President*—William R. Tolbert. *Legislature*—Senate, 18 members; House of Representatives, 52 members (all members of the True Whig party).
Religious Faiths: Protestants, 70% of population.
Education: *Literacy rate* (1962), 8.9% of population aged 15 and over. *Total school enrollment* (1964)—85,856.
Finance (1967 est.): *Revenues*, $47,932,000; *expenditures*, $50,432,000; *monetary unit*, Liberian dollar (equals U. S.$1).
Gross National Product (1966): $165,000,000.
National Income (1964): $153,900.000; average annual income per person, $148.
Crops: Cassava; rubber; palm kernels; cacao beans.
Minerals: Iron ore; diamonds; gold.
Foreign Trade (1966): *Exports*, $147,000,000 (chief exports: iron ore and concentrates; rubber and gums; palm nuts and kernels; coffee); *imports*, $115,000,000 (chief imports: nonelectrical machinery; transport equipment; petroleum products). *Chief trading partners* (1965): U. S. (took 38% of exports, supplied 47% of imports); West Germany (took 27% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 1,880 miles (3,025 km); *motor vehicles* (1965), 14,314; *railways* (1963), 210 miles (338 km); *national airline*, Liberian National Airways.
Communications: *Telephones* (1966): 3,200: *television stations* (1965), 1; *television sets* (1965), 2,700; *radios* (1965), 130,000; *newspapers* (1964), 2.

CHARLES ISAAC, THE FREE LIBRARY OF PHILADELPHIA

A BRANCH of the Free Library of Philadelphia has a reading area for children that contains the storybook three bears (*background*) in stylized form by Pennsylvania sculptor George Papashvily.

LIBRARIES

Library use for education and pleasure increased in 1967. The continued contribution of information services to technological progress and economic growth was seen both in the United States and internationally.

Central planning for library and information services continued during the year. Both in the United States and elsewhere, attention was directed to the application of technology to library organization and operations, to manpower requirements, and to the reading and information demands that could be expected by librarians during the remaining decades of the 20th century. In June, Foster E. Mohrhardt, president of the American Library Association (ALA) for 1967–68, called for the creation of a "Libraries 2000 Committee" and also suggested an "International Library/Reading Year."

National Planning. Throughout 1967 the National Advisory Commission on Libraries heard testimony from leading librarians and information scientists. The commission, which will report to President Johnson through his high-level Committee on Libraries, supported research in four areas critical to national planning of library and information services: the various types of libraries; the social background of problems concerning libraries; library technology; and the federal government's relations with libraries.

At the request of the commission, the American Council of Learned Societies appointed a committee of librarians, scholars, and university executives to study the immediate and future needs of U. S. research libraries, including the problems of financial support, space, personnel, and the implications of increased library technology.

In January 1967 the Committee on National Library and Information Systems (CONLIS), which is composed of the representatives of seven national library associations, recommended the establishment of a national agency to plan, coordinate, and evaluate a national library system. CONLIS was formed to provide unified representation to governmental and private agencies interested in supporting the development of an integrated national system of library and information services.

Along similar but expanded lines, the Council of National Library Associations (CNLA), which consists of the president of the ALA and representatives of 13 American library associations, proposed the creation of a federation of library associations able to speak with genuine authority for the diverse interests in American librarianship. In suggesting a "National Council on Library and Information Services," the CNLA envisaged a body with prestige and authority comparable to that of the American Council of Learned Societies, the Atomic Energy Commission, and the National Research Council. Such a council, which—like the Council on Library Resources—would be foundation supported, would represent the library community in the fields of library development, research, and education.

In 1967 there was clear recognition of the need for national manpower planning in the development of library and information services. The ALA, which met in San Francisco in late June, sought to determine the realities underlying the often-made claim that the United States needs 100,000 more librarians. Debate centered on whether the shortage was real or merely a result of the inappropriate use of existing staff.

With the aid of $235,190 from the U. S. Office of Education, $140,000 from the National Science Foundation, and $24,500 from the National Library of Medicine, researchers at the University of Maryland School of Library and Information Services are attempting to identify manpower resources in the library and information services, determine appropriate levels of educational preparation, and examine the current use of personnel in these fields.

Federal Legislation. In January 1967, President Johnson requested $108.8 million for library activities during the 1968 fiscal year. This figure is approximately $2 million less than Congress appropriated for fiscal 1967 and about $78 million less than was authorized for these programs for fiscal 1968, which began July 1, 1967. The President called for an appropriation of $27.2 million for public library construction in 1968, $12.8 million below the fiscal 1967 appropriation and $22.8 million below the amount authorized for fiscal 1968. The only increased appropriation requested was $8.3 million for library training and research, up from $3.8 million the year before.

Federal Library Activity. The Annual Report of the Librarian of Congress was made public on May 25, 1967. It indicated a current Library of Congress (LC) collection of about 54 million items in 1966 and a 17.6% increase in borrowers over the previous year. It was announced that the Library of Congress Catalog for the years 1963 to 1967, covering total LC acquisitions and indicating where such items may be found in the libraries of the U. S. and Canada, will be published in 72 volumes in the spring of 1969. It was also revealed that the National Union Catalog of works published prior to 1956, now a file of 16 million cards at the LC, will be published in 610 volumes. This book catalog, which will be published at a cost of $4 million, will contain the combined holdings of more than 2,000 U. S. and Canadian libraries and will be the largest single publication project in the history of printing.

In January 1967 the LC Division for the Blind became the Division for the Blind and the Physically Handicapped. The LC may now provide talking books to individuals with disabilities other than blindness or partial impairment of vision.

After July 1, 1967, the LC Machine-Readable Cataloging Project began disseminating magnetic tapes of cataloging data on foreign as well as English-language monographs. The data will accord with the revised and expanded Anglo-American Cataloging Rules. The cataloging rules, worked out by cataloging specialists from the LC and American, British, and Canadian library associations, provides a complete system for the descriptive cataloging of book and nonbook materials.

On Jan. 3, 1967, Ray M. Fry, former head of the School and Library Division of the Field Enterprises Educational Corporation, became director of the Division of Library Services and Educational Facilities of the U. S. Office of Education (USOE). Shortly thereafter, the USOE announced its intention of establishing regional offices through which the division would be represented in Boston, New York, Charlottesville, Va., Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, and San Francisco.

Construction began in mid-1967 on the Lyndon Baines Johnson Library, a new presidential library, on the University of Texas campus at Austin. The library will be in the same building complex as the Lyndon Baines Johnson School of Public Service.

Academic Libraries. Large academic libraries at the University of Chicago, Stanford University, and the Massachusetts Institute of Technology received subsidies in 1967 to develop library systems that might act as patterns for other large research libraries. Chicago received $500,000 from the National Science Foundation for the development of an integrated, modular (building-block) system of library data handling that will include bibliographic processing, catalog-searching, and circulation control. The Stanford University Library received a $417,490 grant from the USOE to study the use of a high-capacity, time-shared computer in the automation of bibliographic operation. Finally, MIT's Project INTREX, which involves the study of remote access to centrally stored information, was granted $250,000 from the Council on Library Resources.

Other academic library research grants from the USOE went to the University of Illinois, for a project entitled "Cognitive Memory—An Epistemological Approach to Information Storage and Retrieval" ($250,000); the Research Department of the Yale University Library, for a study of the interaction between the user and the library catalog ($109,219); and the Institute of Library Research at the University of California (Berkeley) for research on methods of organizing and searching computer-stored records of bibliographic holdings.

Reading
is what's happening
BUS
STOP
NATIONAL LIBRARY WEEK 1967

NATIONAL LIBRARY WEEK PROGRAM

APPEAL TO YOUNG READERS was made by this poster, featured during National Library Week, April 16–22, 1967.

Books for College Libraries (1967), based on the bibliography prepared for the New Campuses Program of the University of California, is a select list of 53,000 books published before 1964. This valuable reference volume will be particularly useful to librarians in 4-year colleges.

School Libraries. The Knapp School Libraries Project began its fifth and final year in March 1967. The report on Phase I of the three-phase project, *Impact: The School Library and the Instructional Program,* is based on the individual reports of the schools that were awarded demonstration school libraries and of the cooperating institutions for teacher education.

Public Libraries. On Jan. 9, 1967, the Intellectual Freedom Committee of the ALA approved a revised version of the Library Bill of Rights. The new bill makes it clear that library materials should not be removed if their content does not accord with contemporary social and ideological norms, and it continues the bar against the proscription of books for partisan or doctrinal reasons.

In early 1967, the ALA published *Minimum Standards for Public Library Systems, 1967* which superseded *Public Library Service* (1956). The 1967 *Standards* have been criticized as being less applicable to isolated libraries than to those that are parts of larger systems.

The USOE awarded $157,288 to the Library Research Center of the University of Illinois for a study of public library organization and planning in relation to the attitudes of librarians, library board members, the public, and government planning agencies. A grant of $188,429 to Rutgers University will support a study of information services provided by public libraries in large metropolitan areas.

National Library Week. National Library Week, April 16–22, 1967, employed a dual theme—"Explore

Inner Space—Read" and "Reading Is What's Happening." The Week was again sponsored by the National Book Committee in cooperation with the ALA, which is seeking to become more involved in decisions affecting this annual activity.

Library Education. The number of ALA-accredited graduate library programs increased in 1967 to 42 with the accreditation of the University of Hawaii Graduate School of Library Studies, the University of Maryland School of Library and Information Services, the North Texas State University Department of Library Service, and the Wayne State University Department of Library Science.

Of special interest to library educators was President Johnson's Health and Education Message of Feb. 28, 1967. The President pointedly referred to a provision in the Higher Education Act of 1965 authorizing funds for the planning, establishment, and development of schools of librarianship and information science.

The library school placement statistics for 1966 were published in the spring of 1967. The mean salary for all 1966 graduates of the ALA-accredited programs of graduate library education was $6,765, while the mean for graduates who had no library experience was $6,442.

Awards. The Melvil Dewey Award for creative professional achievement in librarianship went to Walter H. Kaiser, director of the Wayne County (Mich.) Library. Edmon Low, Librarian of the Oklahoma State University Library, received the Joseph W. Lippincott Award for distinguished service to the profession of librarianship. The Margaret Mann Citation for outstanding professional achievement in cataloging and classification was awarded to G. Sumner Spaulding, chief of the Descriptive Cataloging Division of the Library of Congress.

Louis Shores, long-time dean (now retired) of the Florida State University Library School, who was also professor of reference and bibliography, received two awards in 1967: the Beta Phi Mu Award for distinguished service to education for librarianship and the Isadore Gilbert Mudge Citation for distinguished contributions to reference librarianship. Professor Dorothy L. Bevis of the University of Washington School of Librarianship received the Beta Phi Mu Award for Good Teaching for 1966. The Grolier Award for achievement in guiding and stimulating the reading of children and young people went to Lura E. Crawford, Librarian and director of Library Services at Oak Park and River Forest High School in Illinois.

U. S.-International Activities. On Feb. 2, 1967, President Johnson announced the government's intention of supporting the establishment of indigenous book publishing and distribution facilities in the developing countries of the world. In the spring of 1967 a committee was formed to create an "International Book Institute." The proposed institute would be a nonprofit corporation that would work through contracts with governmental and nongovernmental agencies to disseminate U. S. learning materials to emerging nations.

In 1967 legislation signed by President Johnson in late 1966, implementing the Beirut and Florence agreements, went into effect. The former removes import duties from audiovisual materials to be used in education, and the latter removes certain tariff duties from books and other educational and cultural materials that are brought into the United States from foreign countries.

In April 1967 the Senate Foreign Relations Committee began considering ratification by the United States of two international conventions adopted at the 1958 meeting of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Both conventions are multilateral and provide for the exchange of government documents and publications between governments and nonprofit educational and cultural institutions.

In 1967 there were more than 162 U. S. Information Service libraries spread around the world. The U. S. Agency for International Development contributed both books and technical expertise during the year to 17 university libraries in countries of Africa, Asia, and Latin America.

United Nations. The UNESCO Libraries Division has been incorporated into the newly created Department of Documentation, Libraries, and Archives. Its work includes the development of school libraries and library training in Africa, public library pilot projects in Asia, and school and public library development, as well as education for librarianship, in Latin America.

The United States Committee for the United Nations International Children's Emergency Fund (UNICEF) created a "Center of Information and Documentation About All the World's Children" in New York City in the spring of 1967.

International Conferences. The International Federation of Library Associations held its annual meeting in Toronto on Aug. 15–19, 1967. The International Federation of Documentation (FID) conducted its 33d conference on September 12–22, in Tokyo. On June 14–18, FID and the International Federation of Information Processing had a joint conference in Rome, at which 50 "state-of-the-art" papers—many of interest to librarians—were presented.

(See also AMERICAN LIBRARY ASSOCIATION.)

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LIBYA

The Israeli-Arab war dominated developments in Libya in 1967. Libya took action against the United States and Britain for their alleged assistance to Israel. The office of premier changed hands twice, but there apparently was little change in government policy, and the economy continued to grow.

Role in the Middle East Conflict. Egypt's accusation that Israel received Anglo-American air support sparked destructive riots against the U. S. and British embassies in Benghazi. In mid-June, Libya asked the United States and Britain to liquidate their air bases and withdraw their troops. Some 2,500 dependents of U. S. Air Force personnel at Wheelus Base, near Tripoli, were evacuated. However, many subsequently returned, and talks on the future of the base were begun in August.

On June 7, Libya prohibited production and export of oil, but within a month oil sales were approved to "friendly countries," not including the United States and Britain. The Port Workers' and Petroleum Workers' unions struck July 4–7 in protest, rejecting assurances that shipments were not destined for the United States and Britain.

At the Arab summit conference in Khartoum on August 29–September 1, Libya, Kuwait, and Saudi Arabia announced plans to donate $378 million to Egypt and Jordan to help defray their war losses.

LIBYA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 679,358 square miles (1,759,540 sq km).

Population: 1,682,000 (July 31, 1966 est.).

Chief Cities (1964 census): Tripoli, joint capital, 213,506; Benghazi, joint capital, 137,295.

Government: *King*—Idris I (acceded 1951); *Premier*—Abdel-Hamid Bakkush (took office Oct. 27, 1967). *Parliament*—Senate, 24 members; House of Representatives, 103 members.

Religious Faiths: Muslims, 95% (est.) of population; Roman Catholics, 2.5%; others, 2.5%.

Education: *Literacy rate* (1964), 29% of population aged 6 and over. *Total school enrollment* (1964–65)—205,083 (primary, 175,591; preparatory, 19,196; secondary, 4,016; teacher-training, 2,401; technical, 2,197; higher, 1,682).

Finance (1967–68 est.): *Revenues*, $632,800,000; *expenditures*, $632,800,000; *monetary unit*, Libyan pound (0.3571 pounds equals U. S.$1).

Gross National Product (1966): $1,509,200,000.

Cost of Living Index (1966): 119 (1964=100).

Manufacturing (metric tons, 1964): Pasta, 15,584; soft drinks, 8,485; flour, 6,562; tomato paste, 6,194.

Crops (metric tons, 1965–66 crop year): Barley (1964), 113,000; olives, 100,000; dates, 40,000.

Minerals (metric tons): Crude petroleum (1966), 72,240,000; natural gas (1964), 231,236,000,000 cubic feet.

Foreign Trade (1966): *Exports*, $995,064,000 (chief export: petroleum, $981,904,000); *imports*, $405,048,000 (chief imports, 1965: nonelectrical machinery, $47,474,000; road motor vehicles, $40,748,400). *Chief trading partners* (1965): West Germany (took 38% of exports, supplied 10% of imports); Britain (took 21% of exports, supplied 15% of imports).

Transportation: *Roads* (1964), 11,577 miles (18,631 km); *motor vehicles* (1965), 63,053; *railways* (1965), 220 miles (354 km); *civil airline*, Libiavia.

New Government. Premier Hussein Mazik resigned on July 1 on the grounds of poor health and strain caused by the Israeli-Arab crisis. King Idris I named Abdel-Kader el-Badry, the housing minister, as his successor. On October 25, Premier el-Badry, too, pleaded ill health and resigned. His successor, named on October 27, is Abdel-Hamid Bakkush, who also retains the post of justice minister.

Economy. On March 8 the House of Representatives approved an unprecedented $632.8 million for the 1967–68 budget. It provided $294 million, or 70% of expected oil revenues, for development (especially in public works, communications, and housing); $282.8 million for general expenditures; and $56 million in reserves. Apart from oil royalties not committed for development, the government's main sources of revenue were $126 million from oil exports and $156.8 million from taxes and port fees.

The abundance of foreign exchange in Libya led to greater imports, which exceeded $400 million in 1966, 25% higher than in 1965. While food imports mounted, the government sought to check an increasing farm exodus with subsidies and no-interest loans to farmers. Libyan efforts to obtain higher prices for its oil received the support of the Organization of Petroleum Exporting Countries in Rome, September 18.

JOHN NORMAN
Pace College Westchester

LIN PIAO. See biographical sketch under CHINA.

LINDSAY, John V. See biographical sketch under NEW YORK CITY.

LIQUOR INDUSTRY. See DISTILLING INDUSTRY.

LITERATURE. See AMERICAN LITERATURE; CANADIAN LITERATURE; CHILDREN'S LITERATURE; ENGLISH LITERATURE; FRENCH LITERATURE; GERMAN LITERATURE; ITALIAN LITERATURE; LATIN AMERICAN LITERATURE; SOVIET LITERATURE; SPANISH LITERATURE.

LIVESTOCK

The total numbers of cattle and sheep in the United States continued to decline during 1967 while both poultry and hog numbers rose. Throughout the world, however, the numbers of cattle, hogs, and sheep increased from the previous year.

Livestock in the United States. The number of cattle in the United States declined for the third year in a row. The inventory on Jan. 1, 1968, was about 500,000 less than the 108.5 million cattle counted a year earlier. This reduction was due to the decrease in dairy herds, a decrease that slightly more than offset the increases in beef herds. The total calf crop declined for the second consecutive year, even though the beef calf crop increased. The overall decline was due to the small number of calves born in dairy herds.

The number of hogs slaughtered in 1967 rose about 10% above the previous year's kill of 79.5 million animals. In addition, the pig crop of 91.3 million was larger than in 1966, an increase of nearly 4%. The number of sheep in the United States declined for the eighth year in a row, with the inventory of 22.6 million representing a record low. The slaughter of sheep and lambs in 1967 was 12.8 million, a rather large decrease from the 13 million animals slaughtered in 1966. The lamb crop also declined, from 15.9 million in 1966 to 14.9 million in 1967.

Egg production in 1967 was a record high of 189 million cases, a 5% increase over the previous year. Most of this increase stemmed from a larger number of laying hens, although the average production of each hen also increased. Broiler production also rose, an increase of 3% over the 1966 production. The 1967 turkey crop of 125.6 million was 5% larger than that of the previous year.

World Livestock Populations. The world population of cattle and buffalo increased about 1% over that of 1966, reaching a record high of about 1.14 billion head. The 1967 gain, compared with the average of 1956–60, represents an increase of more than 17%. Greatly increased numbers of cattle in the Soviet Union, eastern Europe, and Oceania accounted for much of the total gain.

The total number of hogs increased for the third year in a row. The 1967 total was up about 2% above the 1966 estimate of about 487.6 million head and substantially more than the 1956–60 average. The number of hogs rose in many regions, especially in North America and eastern Europe.

The world total of sheep in early 1967 was estimated at about 1.03 billion, an increase of 1.3% over the 1966 total. The new figure also represents a 9.4% increase over the 1956–60 average.

JOE WESTERN
Kominus Agri-Info Associates

BEVERLY-WILSHIRE HOMES ASS'N
UNITED ORGANIZATION
KILLING THE GOOSE THAT LAYS THE GOLDEN EGG
TAXACTION
"AMEN"
CUT THIS BUDGET
AX OUR TAX NOW
You're KILLING THE GOOSE THAT LAYS THE GOLDEN EGG
CUT THIS BUDGET
SUPERVIS RESUL
TAXES STRIPPED ME
TAXES GOT ME

UPI

LOS ANGELES property owners protest the proposed 1967–68 Los Angeles County budget at hearings in June.

LOS ANGELES

Events in Los Angeles in 1967 were highlighted by the selection of a new chief of police, cases of alleged misconduct by city officials, and plans for a rapid transit system. Also in the news were continued civil disturbances, a rise in the crime rate, and the enactment of a lobbying registration ordinance.

Crime and the Police. Chief of Detectives Thomas J. Reddin, a career officer in the Los Angeles police department, was selected in February as chief of police, a position left vacant in July 1966 by the death of Chief William H. Parker. Reddin announced that the department would seek to improve community-police relations.

The chief and his department faced the continued problem of an increasing crime rate. "Sunset Strip," where thousands of youths regularly promenade on weekends, posed a special problem. Action was initiated to improve supervision of the many teen-age "night clubs" and to enforce a curfew.

Alleged Official Misconduct. Three cases of alleged misconduct in public office made headlines in 1967. In the latest of a series of investigations into assessors' activities in the state over the past two years, Los Angeles County Assessor Philip E. Watson was cleared of charges of bribery-conspiracy in performance of his duties. Investigations were conducted into alleged irregularities in zoning practices. The city planning commissioner resigned in mid-1967, and a prominent land developer, convicted of grand theft in negotiations to obtain favorable zoning decisions, was acquitted of attempts to bribe Los Angeles city councilmen.

In October the Los Angeles *Times* published a report of its investigations into operations of the harbor department which alleged numerous irregularities, including some in the awarding of contracts.

Demonstrations and Disturbances. On June 23 a march of several thousand persons protesting the nation's Vietnam War policy resulted in a serious clash between police and demonstrators and numerous arrests and injuries. Sporadic minor disturbances reminded residents of Los Angeles of the potentially inflammatory racial situation in their city. On August 7–13, a festival was held in the Watts district to observe the second anniversary of the rioting there and the rebuilding that has taken place since.

Rapid Transit. The Southern California Rapid Transit District presented a preliminary plan in November for a 62-mile network of surface, underground, and elevated tracks for high-speed trains as well as 330 miles of bus feeder lines. The estimated cost was set at $1.6 billion. The measure will be placed on the November 1968 ballot for voter approval of property tax financing. Approval would permit completion of this first stage by mid-1975.

Lobby Control. In 1967, Los Angeles became the first city in the nation to enact a lobby registration ordinance applying to anyone paid to "influence" city legislation. Under the ordinance, a lobbyist must register annually and, each quarter, report his income, lobbying expenditures in excess of $25, names of publications which print, at his request, material designed to influence legislation, and the proposed legislation he is hired to oppose or promote.

Air Pollution. Heavy smog continued to plague Los Angeles in 1967. It is generally agreed that automobiles are the prime cause of the polluted air, and the number of automobiles in Los Angeles grows rapidly each year. Completion of a rapid transit system, which would materially reduce the number of automobile trips made each day, is at least eight years in the future. Late in the year, the state congressional delegation defeated efforts to prohibit California from setting higher standards for smog emission prevention than are required to meet federal standards.

Elections. Los Angeles voters were largely indifferent in 1967, with only 29% turning out for the city elections. They refused to approve a $57.8 million bond issue for a new public library and a $23 million bond issue for police buildings. All but one city council incumbent was reelected. A state college history professor, Julian Nava, became the first Mexican-American ever to be elected to the board of education.

Finances. The City Council adopted a record budget of $368 million for the 1967–68 fiscal year. The tax rate was $2.08 per $100 of assessed valuation, down about 0.16% from 1966. In order to balance the budget, the council imposed a 4% tax on utility users and increased to 5% the hotel-motel transient occupancy tax of 4%.

The city property owner paid $2.46 per $100 valuation in county property taxes, making an average property tax bill of $469.03. The county budget stood at $1.3 billion.

GERALD RIGBY
University of Southern California—Los Angeles

LOUISIANA

A civil rights march, labor disputes, a gubernatorial election, and increased evidence of organized crime in the state dominated the news in Louisiana in 1967.

Civil Rights. About 90 Negroes, guarded by state troopers and National Guardsmen, made a 10-day march in August from Bogalusa to Baton Rouge to protest the lack of Negro job opportunities. On August 20 the marchers, whose numbers had risen to 600, rallied at the state Capitol. Governor John J. McKeithen warned of the consequences of vio-

LOUISIANA • Information Highlights

Area: 48,523 square miles (125,675 sq km).
Population: 3,660,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Baton Rouge, the capital, 166,000; New Orleans, 655,000; Shreveport, 171,000; Metairie, 95,000; Lake Charles, 65,000; Monroe, 57,500.
Government: *Chief Officers*—governor, John J. McKeithen (Democrat); lt. gov., C. C. Aycock (D); secy. of state, Wade O. Martin, Jr. (D); atty. gen., Jack P. F. Gremillion (D); treas., A. P. Tugwell; supt. of pub. instr., William J. Dodd; chief justice, John B. Fournet. *Legislature*—Louisiana State Legislature (met May 8–June 6, 1967; convenes May 13, 1968): Senate, 39 members (0 Republicans, 39 Democrats); House of Representatives, 105 members (4 R, 101 D).
Education: *School enrollment* (1965–66)—public elementary, 522,400 pupils (18,700 teachers); public secondary, 307,600 pupils (14,100 teachers); nonpublic schools, 160,400 pupils (5,810 teachers); college and university (fall 1965), 89,050 students. *Public school expenditures* (1965–66)—$348,609,000 ($468 per pupil); average teacher's salary, $6,039.
Public Finance (fiscal year 1967): *Revenues*, $1,190,851,820 (2% sales tax, $146,006,000; motor fuel tax, $86,740,795; federal funds, $328,282,561). Expenditures, $1,215,605,050 (education, $477,589,709; health, welfare, and safety, $540,363,325; highways, $197,652,016). *State debt*, $704,969,560 (June 30, 1967).
Personal Income (1966): $8,235,000,000; average annual income per person, $2,277.
Public Assistance (fiscal year 1967): $185,859,501 to 262,085 recipients (aged, $132,213,253; dependent children, $33,670,299).
Labor Force (employed persons, 1966): *Agricultural*, 97,600; *nonagricultural* (wage and salary earners), 1,154,000 (14.5% manufacturing, 18.6% trade, 15.6% government). *Unemployed persons* (1966)—56,200.
Manufacturing (1965): Value added by manufacture, $2,252,262,000 (transportation equipment, $255,800,000; primary metals, $90,746,000; nonelectrical machinery, $39,336,000; printing and publishing, $68,606,000; fabricated metals, $101,534,000; food and products, $350,944,000).
Agriculture (1966): *Cash farm income*, $601,755,000 (livestock, $220,542,000; crops, $329,406,000; govt. payments, $51,807,000). *Chief crops* (tons)—rice, 1,060,500 (ranks 2d among the states); sweet potatoes, 214,500 (rank, 1st); soybeans, 609,700; hay, 604,000; cottonseed, 185,000.
Mining (1966 est.): *Production value*, $3,383,686,000 (ranks 2d among the states). *Chief minerals* (tons)—sand and gravel, 16,950,000; salt, 8,613,000; stone, 7,902,000; sulfur, 4,029,000; clays, 990,000; lime, 833,000.
Fisheries (1966): *Commercial catch*, 647,416,500 pounds ($39,666,185). *Leading species*—menhaden, 555,852,100 pounds ($9,557,646); saltwater shrimp, 62,269,400 pounds ($24,387,589); hard blue crabs, 7,985,600 pounds ($537,422).
Transportation: *Roads* (Oct. 1966), 31,990 miles (51,482 km); *motor vehicles* (1967), 1,672,292; *railroads* (1964), 3,899 line miles (6,275 km); *airports with scheduled service* (1967), 8.
Communications: (1966): *Telephones* (1967), 1,440,200; *television stations*, 12; *radio stations*, 104; *newspapers*, 22.

lence and, although the marchers passed through areas which were reputedly centers of Ku Klux Klan activity, no serious trouble ensued.

On October 10, Bogalusa police provided special security measures to ensure the safety of police and city officials who reportedly had been designated as targets of an assassination plot. The plot called for the slaying of six men in the event of civil disturbance in Bogalusa, with deaths to be blamed on the rioters. An unidentified extreme right-wing group was suspected.

Labor. A labor crisis in the Baton Rouge area in June and July halted an estimated $250 million worth of industrial construction and idled about 15,000 workers. Industrialists were reported to be angered by what they termed featherbedding and unexpectedly high building costs. Shootings and bombings occurred at construction sites. Another $250 million in construction was halted in the Lake Charles area. The state legislature, in a special 12-day session called by Governor McKeithen in July, created a commission to investigate racketeering and extortion in labor-management relations in Louisiana.

REELECTED for a second term in 1967, Gov. John J. McKeithen won by a landslide.

UPI

Election. Empowered to run to succeed himself by a 1966 state constitutional amendment, McKeithen was opposed for the Democratic party nomination by one major candidate, Rep. John R. Rarick. Investigation of organized crime in the state and moderate-versus-conservative views of race problems were among the main issues of the campaign. In the November 4 election, McKeithen won by a landslide vote.

Crime. A series of articles on alleged organized crime in the state, which appeared in *Life* magazine in September, resulted in the governor's prompt suspension of a state police captain and touched off three grand jury investigations. The East Baton Rouge grand jury indicted a contractor on a charge of public bribery.

Assassination Probe. New Orleans District Attorney Jim Garrison was conducting a probe into an alleged conspiracy in the assassination of President John F. Kennedy. Garrison's investigation resulted in the indictment on March 22 of retired New Orleans businessman Clay L. Shaw. (See also NEW ORLEANS.)

Education. A state standby grant-in-aid program to continue state grants to pupils attending private segregated schools was attacked in federal court in 1967. The Louisiana 1962 Act, a similar measure, was held invalid by the courts in August.

WILLIAM W. SHAW
Tulane University

LUCE, Henry Robinson

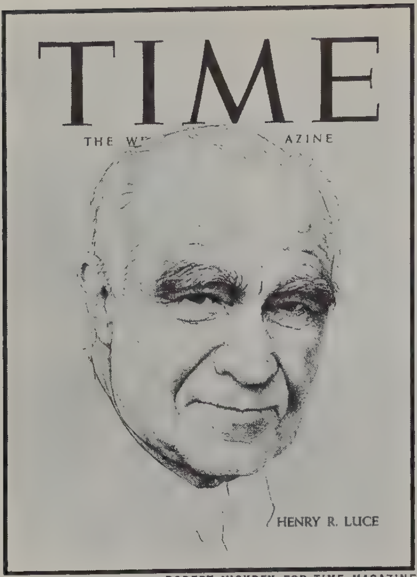
American editor and publisher: b. Tengchow, China, April 3, 1898; d. Phoenix, Ariz., Feb. 28, 1967.

Henry Robinson Luce created and developed two innovations in American popular media—the news magazine and the picture-feature magazine. The techniques he introduced in *Time* and *Life* influenced all journalism. As a businessman, he built Time Incorporated into the country's largest publishing concern, with annual revenues reaching $503 million.

Early Life. Born in China, Luce was the son of American Presbyterian missionaries. At 14 he went to the United States to attend Hotchkiss School in Connecticut, where he met Briton Hadden, later to be his partner. At Yale together, Luce and Hadden edited the campus paper. While in the U. S. Army in 1917–18, they laid their first plans for their own paper. They returned to Yale, graduating in 1920.

Founding *Time*. Luce and Hadden went to New York in 1922 to try to publish a weekly news magazine. They were able to raise $86,000, and on March 3, 1923, the first issue of *Time* appeared. The characteristics of the magazine were soon clear: departmentalized news, unsigned material in a single style, and stunts of syntax that became *Time's* hallmark.

In February 1930, in the very teeth of the depression, Luce issued a second magazine called *For-*



ROBERT VICKREY FOR TIME MAGAZINE

HENRY R. LUCE, founder of *Time* magazine, appeared for the first time on its cover after his death, February 28.

tune, devoted to business and industry. Despite its timing and its price ($1 a copy), *Fortune's* investigative reporting made it a success.

Photojournalism. In the 1930's, Luce planned a magazine using photography not merely for illustration but as its primary medium. *Life* began publication on Nov. 23, 1936. It was at once a popular success, and eventually earned more advertising revenue each year than any other American magazine. Its circulation in 1967 was more than 7 million.

Time Incorporated. Luce's company greatly widened its operations. In the 1930's it presented *The March of Time* on radio and as a venture in documentary film. After World War II, the company expanded into overseas editions, books, radio and television broadcasting, and educational materials.

Luce the Editor. Luce was often a figure of controversy among journalists. His magazines rarely carried his words, yet his interests— Republicanism, internationalism, anti-Communism, and the progress of what he named in 1941 "The American Century" —flavored their pages. This led to charges of partisanship; for his part, Luce never claimed that he or his magazines were neutral on issues.

As editor in chief, Luce played the role of dynamo rather than technician. Associates recall his intense concentration, his neglect of amenities, his bombardment of subordinates with questions. He stepped down from his top position in April 1964, turning over command to his chosen successor, Hedley W. Donovan, and taking the partly advisory position of editorial chairman. In his new role he was able to travel and to spend more time at his home in Phoenix, where he died in 1967.

Personal Life. Luce married Lila Hotz in 1923, and had two sons. After a divorce in 1935, Luce married Mrs. Clare Boothe Brokaw, who was later a member of Congress and ambassador to Italy.

James Boylan
Editor, "Columbia Journalism Review"

LUMBER. See Forestry and Lumbering.

LUTHERAN CHURCHES

A historic milestone in ecumenical relations occurred in 1967 when Lutherans and Roman Catholics cosponsored joint observances of the 450th anniversary of the Protestant Reformation, begun by Martin Luther in 1517. The theme of the observances was "Life . . . New Life." In a unique confrontation, scholars of the two communions engaged in regional theological discussions in 14 U. S. cities, and the talks were to continue in 1968. Similar dialogues were also held locally in many areas.

On the national level, Lutheran and Roman Catholic theologians continued doctrinal discussions that were begun in 1965. After their fifth session, the last three on the topic "The Eucharist as Sacrifice," the group issued a statement that noted "the developing convergence and the continuing difficulties in regard to the Lord's Supper," possibly one of the thorniest issues examined by the theologians. Lutheran-Eastern Orthodox talks were begun in November 1967.

The traditionally conservative 2.8 million-member Lutheran Church-Missouri Synod (LC-MS) voted at its 47th general convention to study possible membership in the Lutheran World Federation and the World Council of Churches, as well as formal fellowship with the American Lutheran Church (ALC).

The LC-MS and the Synod of Evangelical Lutheran Churches (SELC), as the remaining partners in the Lutheran Synodical Conference, agreed to dissolve the 95-year-old organization. The Evangelical Lutheran Synod (ELS) and Wisconsin Evangelical Lutheran Synod (WELS) withdrew from the conference in 1963. Both the LC-MS and the SELC are associated with the Lutheran Church in America (LCA) and the ALC in the Lutheran Council in the United States of America, which completed its first year of operation as a cooperative agency in 1967.

More than $4 million was raised in 1967 by Lutheran World Action for a global program of spiritual and material aid. Since the appeal was initiated in 1940 the LCA and the ALC and their antecedent bodies have contributed more than $90 million to meet needs in 80 countries.

In 1967 the SELC, with 20,464 members, elected Dr. John Kovac of St. Louis, Mo., to his third 2-year term as president. The Wisconsin Synod, with 367,959 members, named the Rev. Oscar J. Naumann of Milwaukee, Wis., to an eighth 2-year term as president.

Lutheran churches in North America reported 9,170,298 baptized members in 1967, 8,868,073 in the United States and 302,225 in Canada.

Erik W. Modean
Lutheran Council in the U. S. A.

LUXEMBOURG

The reconstructed Christian Social-Socialist coalition government under Premier Pierre Werner took office on Jan. 4, 1967. A coalition of the same parties had broken up in November 1966 over the date for ending conscription. The new government's program, subsequently approved by Parliament, called for the abolition of conscription as of July 1, 1967. It reaffirmed a policy of collective security within the North Atlantic Treaty Organization (NATO). Regular armed forces units would be used for territorial duties, but would be so trained and equipped

LUXEMBOURG • Information Highlights

Area: 998 square miles (2,586 sq km).
Population: 333,000 (July 31, 1966 est.).
Chief City (1964 est.): Luxembourg, the capital, 77,254.
Government: *Head of state*—Grand Duke Jean (acceded Nov. 12, 1964); *Premier*—Pierre Werner (took office Feb. 26, 1959). *Parliament*—Chamber of Deputies, 56 members (party seating, 1967: Christian Social, 22; Socialists, 21; Democrats, 6; Communists, 5; Independents, 2).
Religious Faiths: Roman Catholics, 97% of population.
Education: *Literacy rate*, 99% of population. *Total school enrollment* (1964)—48,268 (primary, 35,935; secondary, 6,991; technical, 4,762; higher, 580).
Finance (1966 est.): *Revenues*, $173,720,000; *expenditures*, $173,967,000; *monetary unit*, franc (50 francs equal U. S.$1).
Gross National Product (1966): $676,000,000.
National Income (1966): $534,000,000; average annual income per person, $1,603.
Economic Indexes (1966): *Industrial production*, 121 (1958=100); *agricultural production* (incl. Belgium; 1965), 128 (1956–57=100); *cost of living*, 115 (1958=100).
Manufacturing (metric tons, 1965): Crude steel (1966), 4,392,000; cement, 222,000; beer, 51,200; meat, 24,000; wine, 11,300; lumber, 27,000 cubic meters.
Crops (metric tons, 1966): Wheat, 39,000 oats, 36,000; barley, 27,000; grapes (1965), 16,000; rye, 10,000.
Minerals (metric tons, 1965): Iron ore (1966), 6,528,000; limestone, 27,000; gypsum, 5,000.
Transportation: *Roads* (1964), 2,759 miles (4,440 km); *motor vehicles* (1965), 74,668 (automobiles, 61,686); *railways* (1964), 210 miles (338 km); *civil airline*, Luxair.
Communications: *Telephones* (1966): 79,744; *tv stations* (1965), 1; *tv sets* (1965), 29,000; *radios* (1965), 119,000; *newspapers* (1964), 7 (daily circulation, 140,000).

that in case of need they could be integrated into NATO forces. Government expenditures would be kept within limits set by the growth of the economy.

On July 1, 1967, the executive branches of the European Economic Community (EEC), the European Atomic Energy Community (Euratom), and the European Coal and Steel Community (ECSC) were merged, with headquarters in Brussels. As compensation for the loss of the ECSC High Authority (which had been located in Luxembourg), several subsidiary activities of the three communities will be temporarily located in Luxembourg.

Economy. The growth rate of Luxembourg's economy is the lowest in the EEC. The past decade has seen a greater diversification of production with the coming to Luxembourg of several major industrial complexes, including Goodyear Rubber, Du Pont, Monsanto Chemical, and Eurofloor. However, steel production still employs one fifth of the population and accounts for 28% of the gross national product. A recent glut in the steel market has depressed prices, and worker recruitment stopped in 1967.

AMRY VANDENBOSCH
University of Tennessee

McCARTHY, Eugene Joseph

U. S. Senator from Minnesota: b. Watkins, Minn., March 29, 1916.

Senator McCarthy announced on Nov. 30, 1967, that he would oppose President Johnson in selected Democratic state primaries in 1968. His candidacy was aimed at forcing either a change of the administration's Vietnam policy or a change of the administration itself. A highly respected Senate "dove," McCarthy advocated a gradual de-escalation of the U. S. military effort in Vietnam, a halt in the bombing of the North, and an eventual negotiated peace.

Presidential Challenger. The chance of Senator McCarthy's capturing the party's presidential nomination was regarded as slight, and that of his gaining the office as slighter still. But his bold challenge was expected to have a significant effect on President Johnson's campaign planning and, possibly, on his conduct of the war in Vietnam. Furthermore, the possibility of McCarthy's forcing an open fight at the 1968 Democratic convention obviously raised important problems of strategy for Sen. Robert F. Kennedy of New York, the strongest potential rival to Johnson within the party.

At the time of his announcement, Senator McCarthy avoided describing himself as a candidate. On the contrary, he said he would be satisfied if his pursuit of primary votes forced the President to modify his policy. "I am concerned," he said, "that the administration seems to have set no limit to the price which it's willing to pay for a military victory." He subsequently stated that he would not be unalterably opposed to a Kennedy candidacy in the election in the event Kennedy proved to be the best means of unseating the President.

Although some commentators speculated on McCarthy's motives in entering the primary race, there seemed little reason to doubt that his real motives were exactly as stated. Most observers felt that he was taking a considerable risk for a minimal chance of obtaining higher office, and several of them expressed doubt that he had any desire for the office. Others, however, recalled that Senator McCarthy had been a leading contender for the vice presidential nomination in 1964 and speculated that President Johnson's blocking of his nomination may have inspired him to oppose Johnson in 1968. In any event, his credentials for office were impressive.

Background. Eugene McCarthy grew up an Irish Catholic farm boy in the environs of Protestant, urban Minneapolis. He attended parochial schools in Minnesota and graduated from St. John's University in Collegeville, Minn., when he was 19. He received an M. A. degree from the University of Minnesota in 1939, and, except for wartime civilian service at the Pentagon in Washington, he taught economics and sociology in Minnesota until his election to the U. S. Congress from Minnesota's 4th district in 1948.

McCarthy was elected to the Senate in 1958 and soon established a quiet reputation as one of the most trustworthy and articulate members of that body. As a member of the Senate Finance and Foreign Relations committees he has concerned himself deeply with the problems of Senate ethics, U. S. overseas arms sales, and U. S. intervention abroad.

McCarthy lives in a modest house in a Washington suburb with his wife, the former Abigail Quigley, whom he married in 1945, and their four children. The senator, who was a semiprofessional baseball player in his youth, enjoys a reputation for personal warmth and modesty and a dry, sometimes acerbic, wit. He is the author of *Frontiers in American Democracy* (1960) and *The Limits of Power* (1967), a critical examination of U. S. foreign policy in which he urges greater cooperation with other nations in attempting to deal with the world's problems.

J. S. C.

MAGAZINES

The magazine industry again reached new highs in most of the important financial categories in 1967, and 1968 was expected to be at least as good a year. The Magazine Publishers Association (MPA) estimated 1967 advertising revenues at some $1,190,000,000, compared with $1,166,572,000 in 1966, even though the number of advertising pages sold was not expected to show much, if any, gain over the 87,061 in 1966. Circulation continued to gain, with Audit Bureau of Circulation general and farm magazines totaling nearly 230,000,000 copies in the first half of the year, compared with 225,661,797 in the last half of 1966.

In the battle for advertising dollars, magazines continued to stress regional editions and regional advertising, both of which continued to grow. In 1959, for example, regional advertising revenues were just over $42.6 million, or 5.4% of the total; in 1967 regional ad revenues were expected to approach $197 million, or nearly 17% of the total. On another front a growing concern over what many publishers felt was a trend toward government regulation and control of advertising led to an MPA-sponsored "Freedom of Choice" advertising campaign. Fear of government action was heightened by statements from influential economists, educators, and government officials.

Business Publications. Constantly rising costs and stiffer competition brought a slight reduction in the number of business magazines to approximately 2,350 in 1967, compared with 2,395 in 1966, and more than 200 below the high mark of 2,559 in 1964. But the lesser number of publications established new highs in the three most important business areas. Advertising volume, according to American Business Press, Inc., totaled some $772,100,000 (exclusive of production costs) in 1967, compared with $735,300,000 the year before. Advertising pages sold reached approximately 1,273,000, compared with 1,254,000 in 1966. (Editorial pages produced totaled 836,000 in 1967, up from 803,000 in 1966.) Circulation was estimated at 64 million, against 61.3 million in 1966.

New Publications. Continued growth of the U. S. youth market was reflected in the establishment of eight new magazines in 1967—*Cheetah,* by Twenty First Century Publishing Co.; Hearst's *Eye; Fave; His; Now; Scene; Soundblast;* and *Young Scene.* Other new general circulation publications included: *The American Sportsman; Avante Garde; Budget Travel; Cameo Baby; Corin Tellado* (in Spanish); *Cultural Affairs; Entertainment News; Expansion* (in French); *Expecting,* a quarterly; *Fashionews; Florida,* for distribution on National Airlines; *Here Now; Idea & Image; Interplay; Israel; Les Gals; Man About Town; Mankind; Men's Bazaar; New; Nurse Nellie's Waiting Room Reader; Polo; Pride; Probe; Psychology Today; Rites of Spring; Scope; Señorita* (in Spanish); *Single Parent; Sixty-Minute Hour; Southern California Yachting News; Sportfishing; TV Radio Talk; Traveling Man; Wall Street Reports; Weight Watchers Magazine; The Western Skier; Word;* and two revivals—*Popular Aviation* and *Show.*

New magazines in the business and professional field included: *Airline Management & Marketing; American Industrial Properties Report* (formerly *Newsletters*); *Animal Hospital Management; Audi-Arena,* which went from an annual to a quarterly; *Business Insurance; Computer Operations-Journal of Marketing Technology; Education News; Environmental Science & Technology; Fashion Week; FDA; Fleet Distribution; Florist; Food & Equipment Product News; Geriatric Times; Grocery Manufacturer; Jobs USA & Overseas; Journal of Typographical Research; MD Pacific; Management Guide to Business Aviation; Medical Aspects of Human Sexuality; Modern Education & Vocational Training; Modern Markets; Potentials; Rotor & Wing; Safety Product News; Ski Industry Guide; State Government Administration; Table of Contents; Theatre Crafts; Total; Urban; Urban Affairs Reporter; Warehouse Distributor News;* and *Worldwide P & I Planning.*

Failures. Discontinued in 1967 were *Home Craftsman;* McGraw-Hill's 20-year-old *Nucleonics;* and *Polo World.*

Canadian Developments. More than a year of operations under Canada's tariff law amendments, written to protect Canadian magazines, proved that U. S. publications could still compete. Most U. S. publishers with circulation in Canada reported that only minor changes in some advertising copy had been necessary to comply with the regulations.

Two general circulation magazines, *Ferment* and *Hostess,* were introduced in 1967, reflecting Canada's growth and its ability to challenge U. S. publications.

JOHN FOSTER, JR.
Graduate School of Journalism,
Columbia University

MAIL. See POST OFFICE.

MAINE

Kenneth Curtis, the state's new Democratic governor, was sworn in on Jan. 5, 1967. He immediately announced plans for a major government reorganization, calling for the abolition of the executive council, the election of a lieutenant governor, and the power to appoint three key state officers—the attorney general, the secretary of state, and the treasurer—all now elected by the legislature. Governor Curtis also called for the establishment of a department of transportation and a department of air and water pollution, and for the reorganization of the department of economic development. For seven months the governor and the state's Republican legislature confronted each other over these and other issues. The result was a stalemate.

Legislation. Governor Curtis refused to accept a 1% increase (to 5%) in the state sales tax, urged on him by the legislature as a means of increasing state revenue. The legislature passed only a "bare-bones" budget before adjourning in July. In September the state's voters rejected several bond issues, including one that would have provided several million dollars for the University of Maine.

A special session of the legislature, called in October, enacted a compromise measure that increased the sales tax by 0.5%. Several measures defeated in the September referendum were once again referred to the public, and in November the voters accepted some measures they had rejected in September. Six amendments to the constitution were adopted, most of them extending the state's credit.

One of the most controversial measures brought

MAINE • Information Highlights

Area: 33,215 square miles (86,027 sq km).
Population: 973,000 (July 1, 1966 est.).
Chief Cities (1965 est.): Augusta, the capital, 21,800; Portland, 72,000; Lewiston, 42,500; Bangor, 39,000; Auburn, 24,200; South Portland, 23,200; Biddeford, 18,800.
Government: *Chief Officers*—governor, Kenneth M. Curtis (Democrat); secy. of state, Joseph T. Edgar (Republican); atty. gen., James S. Erwin (R); treas., Michael A. Napolitano; commissioner of education, William T. Logon; chief justice, Robert B. Williamson. *Legislature*—(convenes Jan. 3, 1968); (met Jan. 4–July 8, 1967): Senate, 34 members (23 Republicans, 11 Democrats); House of Representatives, 151 members (95 R, 56 D).
Education: *School enrollment* (1965–66)—public elementary, 157,000 pupils (5,650 teachers); public secondary, 78,000 pupils (3,750 teachers); nonpublic, 39,300 pupils (1,740 teachers); higher (fall 1965), 22,999 students. *Public school expenditures* (1965–66)—$87,800,000 ($410 per pupil); av. teacher's salary, $5,550.
Public Finance (fiscal year 1967): *Revenues,* $216,716,134 (4% sales tax, $54,669,067; motor fuel tax, $28,669,698; federal funds, $28,056,732). *Expenditures,* $229,993,242 (education, $60,307,088; health, welfare, and safety, $43,649,474; highways, $61,741,848). *State debt,* $89,487,000 (June 30, 1967).
Personal Income (1966): $2,422,000,000; average annual income per person, $2,477.
Public Assistance (fiscal year 1967): $15,840,320 to 32,783 recipients (aged, $6,569,358; dependent children, $7,094,254).
Labor Force (employed persons, July 1967): *Agricultural,* 18,000; nonagricultural (wage and salary earners), 364,700 (36.8% manufacturing, 18.9% trade, 17.8% government). *Unemployed persons* (July 1967)—16,600.
Manufacturing (1966): Value added by manufacture, $210,842,719 (transportation equipment, $5,413,380; primary metals, $1,536,959; nonelectrical machinery, $9,628,600; electrical machinery, $14,472,991).
Agriculture (1966): *Cash farm income,* $250,926,000 (livestock, $142,895,000; crops, $105,959,000; govt. payments, $2,072,000). *Chief crops* (tons)—potatoes, 1,935,500 (ranks 2nd among the states); hay, 508,000; apples, 46,800; oats, 29,376; maple syrup, 54.
Mining (1966); *Production value,* $16,734,000; *Chief minerals* (tons)—sand and gravel, 7,027,000; stone, 1,092,000; clays, 45,000; peat, 1,600.
Fisheries (1966): *Commercial catch,* 200,391,318 pounds ($24,329,156). *Leading species*—ocean perch, 65,082,169 pounds ($2,678,683); sea herring, 58,298,675 pounds ($1,208,693); Maine lobsters, 19,915,816 pounds ($14,904,498).
Transportation: *Roads* (1967) 21,197 miles (34,106 km); *motor vehicles* (Dec. 1966), 433,298; *railroads* (1966) 2,508 track miles (4,035 km).
Communications (1967): *Telephones* (1966), 389,000; *television stations,* 9; *radio stations,* 35; *newspapers,* 9 (daily circulation, 262,849).

before the legislature in its regular session was a bill to liberalize the state abortion law. The measure, which would have allowed therapeutic abortion, was defeated by the House.

Education. The political stalemate between the governor and the legislature resulted in cutbacks in the budgetary requests of state colleges. Several capital improvement projects were approved by the voters, however, including a $1.8 million graduate research center in oceanography for the University of Maine, in Portland.

Industry and Agriculture. The state economy suffered setbacks in two areas in 1967. Bad weather cut into Maine's usually profitable summer tourist business, and the Dickey-Lincoln School Project, a public power project on the St. John River, was denied further planning funds by the U. S. Senate. A 4-month struggle between supporters and opponents (the latter primarily conservationists and private power interests) preceded the defeat of the $875,000 appropriation measure.

Hopes rose in 1967 for diversifying the state's agriculture, dependent on the federally supported sugar beet industry. Sugar beet acreage increased from 2,500 to 10,000 during the year. There was still doubt, however, that Maine farmers would ever utilize their quota of 33,000 acres. (See also AGRICULTURE.)

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MALAGASY REPUBLIC

In Malagasy the year 1967 was marked by changes in President Philibert Tsiranana's cabinet.

Government Affairs. President Tsiranana announced cabinet changes on August 22 and August 31. Jacques Rabemananjara was named foreign minister, succeeding Albert Sylla, who died in a plane crash on July 19. The Ministry of Social Affairs, held by Deputy Prime Minister Calvin Tsiebo, was abolished, and the responsibilities of the ministry were transferred to Jean-François Jarison, the minister of labor and acting minister of health. The position of secretary of state for information and tourism, held by Alfred Rajaonarivelo, was raised to cabinet level.

Denouncing what he called the lack of professionalism and excessive red tape in Malagasy government bureaus, President Tsiranana told a cabinet meeting on January 20 of plans to reform the civil service. He noted that there was less output from 50,000 civil service workers in the Malagasy Republic than there had been from 12,000 workers under French colonial rule.

MALAGASY • Information Highlights

ASIA
AFRICA

Area: 226,657 square miles (587,041 sq km).
Population: 6,810,000 (July 1, 1966 est.).
Chief City (1964 est.): Tananarive, the capital, 298,813.
Government: *President*—Philibert Tsiranana (took office Mar. 30, 1965); *Parliament*—Senate, 54 members (party seating, 1966: Social Democrats, 52; nonpartisan, 2); National Assembly, 107 members (party seating, 1966: Social Democrats, 98; Movement for National Revival, 6; Congress party, 2; vacant, 1).
Religious Faiths: Tribal religions, 50% of population; Roman Catholics, 20%; Protestant, 18%; Muslims, 8%; others 4%.
Education: *Literacy rate* (1953), 33.5% of population aged 14 and over. *Total school enrollment* (1964)—692,580 (primary, 633,039; secondary, 50,136; teacher-training, 2,058; technical, 4,929; higher, 2,418).
Finance (1967 est.): *Revenues,* $115,600,000; *expenditures,* $125,600,000; *monetary unit,* Malagasy franc (246.85 francs equal U. S.$1).
Gross National Product (1966 est.): $650,000,000.
Cost of Living Index (1966): 108 (1964=100).
Manufacturing (metric tons, 1965): Sugar (1966), 110,000; cement, 39,000; beer, 3,500; tobacco, 1,187.
Crops (metric tons, 1966–67 crop year): Rice, 1,400,000; cassava, 830,000; sweet potatoes and yams (1965–66), 280,000; bananas (1963–64), 150,000; maize (1965–66), 109,000; potatoes (1963–64), 70,000; coffee, 55,500.
Minerals (metric tons, 1965): Graphite, 17,015; chromite, 6,500; titanium concentrate, 6,300; coal, 2,000; monazite, 1,085; zircon concentrate, 644; mica, 629; uranium ore, 421.
Foreign Trade (1966): *Exports,* $97,700,000 (chief exports, 1965: coffee, $28,889,000; vanilla, $9,870,000; sisal, $5,427,000; sugar and honey, $4,888,000); *imports,* $141,400,000 (chief imports, 1965; textile yarn and fabrics, $14,729,000; transport equipment, $14,361,000; motor vehicles, $11,129,000. *Chief trading partners* (1965): France (took 45% of exports, supplied 62% of imports); U. S. (took 27% of exports, supplied 4% of imports).
Transportation: *Roads* (1965), 24,855 miles (40,000 km); *motor vehicles* (1965), 59,265 (automobiles, 34,247); *railways* (1965), 537 miles (864 km); *merchant vessels* (1966), 7 (19,000 gross registered tons); *principal airports,* Tananarive; Majunga.
Communications: *Telephones* (1966): 19,442; *radios* (1963), 285,000; *newspapers* (1962), 12.

Economic Affairs. In an agreement signed in Tananarive on January 9, the Republic of China (Taiwan) agreed to extend agricultural cooperation to Malagasy. Taiwan is helping Malagasy to improve its rice-growing techniques and to develop a bamboo industry.

On August 24 the World Bank approved a 30-year loan of $4.8 million to expand the facilities of three secondary technical schools and two teacher-training centers in Tananarive. The schools will serve 3,110 students, as compared with their present enrollment of 1,350.

U. S. Ambassador. David S. King was appointed United States ambassador to the Malagasy Republic on January 12 (the appointment was confirmed on January 26). King, a Democrat and former member of the U. S. House of Representatives from Utah, replaced C. Vaughn Ferguson.

International Airport. On June 24, President Tsiranana and French Defense Minister Pierre Messmer inaugurated the new Ivato international airport near Tananarive. The new facility replaces an older airport much farther from the city. France paid two thirds of the $7.2 million cost.

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MALAMUD, Bernard. See biographical sketch under AMERICAN LITERATURE.

MALAWI

Malawi concentrated on trade and communication improvements in 1967 as it celebrated its first anniversary as an independent republic within the Commonwealth of Nations. By affirming trade relations with the Republic of South Africa and communication agreements with Portuguese Mozambique, Malawi evoked criticism from other independent African countries, which are hostile to any negotiations with white-controlled southern Africa.

South Africa Trade Accord. Malawi signed a trade agreement with the Republic of South Africa on March 13. The new pact replaced one of May 1960 between South Africa and the former Federation of Rhodesia and Nyasaland that had continued in effect with Malawi. The new agreement guaranteed that Malawi will receive favorable trade treatment of its products and that its tea, essential oils, cotton waste, and 5 million pounds of tobacco annually will be admitted to South Africa free of duty.

President Hastings Kamuzu Banda defended his trade negotiations with South Africa against criticism from leaders of other African states. He told the National Assembly on March 29 that trade with South Africa was necessary for landlocked Malawi's economy and that it did not imply support for the policy of apartheid. He accused his critics of hypocrisy for censuring him while they themselves traded secretly with South Africa for essential foodstuffs.

Relations with Portugal. Malawi ministers visited Lisbon, Portugal, on March 15 for talks on a proposed 140-mile (225-km) railway connection between Malawi and Mozambique on the Central African and Trans-Zambezi railways. The new rail connection would carry trade to the Indian Ocean. On May 27 it was announced that Portugal had purchased a 93% share in the railway and had paid a $3,780,000 first installment toward the rail link between the two countries. Portuguese Foreign Minister Nogueira visited Malawi on July 30–August 1.

On October 12, as an outgrowth of closer economic ties, Portugal and Malawi agreed on a general policy of cooperation. Malawi nominated an ambassador to Portugal, the first envoy from *black-ruled Africa* since the independent African states initiated a campaign against Portugal's colonial policy in 1963.

Banda's Foreign Visits. President Banda visited Britain on May 30–June 1 for talks with Prime Minister Harold Wilson on the Rhodesian problem. In the United States, June 2–11, Banda reportedly asked President Johnson for aid for the proposed rail connection with Mozambique. He also requested financing for a $36 million road along the west side of Lake Malawi to open up areas of rich fishing and agricultural opportunities. Banda also visited Nationalist China and Thailand in August.

Cabinet Changes. On April 20, Minister of Local Government R. B. Chidzanja was replaced by G. C. Chakuamba, whose ministry of works and supply portfolio was taken over by John Msonthi, minister of transport and communications.

Trade Shift. In April the *Annual Economic Review,* published by the Standard Bank of Malawi, indicated that Malawi's imports from Rhodesia had dropped from 37% to 26%, and that Britain's share of imports from Malawi had risen from 25% to 35%. Malawi's estimated imports from South Africa in 1966 were valued at $5,600,000; exports amounted to $1,400,000 and were expected to increase.

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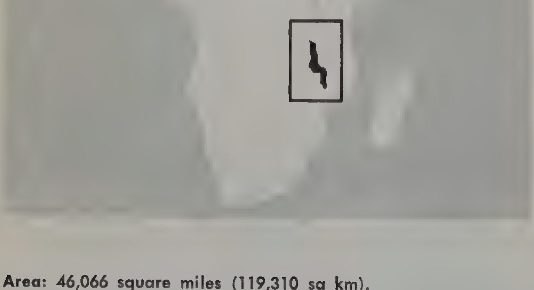
MALAWI • Information Highlights



Area: 46,066 square miles (119,310 sq km).
Population: 4,042,412 (August, 1966 census).
Chief Cities (1965 est.): Zomba, the capital, 14,000; Blantyre-Limbe, 58,400.
Government: *President*—Hastings Kamuzu Banda (took office July 6, 1966); *Parliament*—National Assembly, 55 members: Malawi Congress Party, 50; 5 special nominees.
Religious Faiths: Tribal religions, Muslims, and others, 81% of population; Roman Catholics, 19%.
Education: *Literacy rate* (1960), 6% of African population aged 14 and over. *Total school enrollment* (1965)—344,300 (primary, 331,279; secondary, 10,601; teacher-training, 1,397; technical, 839; higher, 184).
Finance (1967 est.): *Revenues,* $39,200,000; *expenditures,* $52,900,000; *monetary unit,* pound (0.4167 pound equals U. S.$1 as of Nov. 20, 1967).
Gross National Product (1966): $211,120,000.
Manufacturing: Cement; lumber.
Crops (metric tons): Maize (1963–64), 907,000; cassava (1963–64), 136,000; sweet potatoes and yams (1963–64), 41,000; tobacco (1966–67), 18,600; tea (1966), 15,402.
Foreign Trade (1966): *Exports,* $48,577,000 (chief exports: tea, $12,454,000; tobacco, $12,152,000); *imports,* $75,790,000 (chief imports, 1965: machinery and transport equipment, $11.785,000). *Chief trading partners* (1965): Britain (took 46% of exports, supplied 25% of imports).
Transportation: *Roads* (1965), 6,411 miles (10,315 km); *motor vehicles* (1965), 13,028.
Communications: *Telephones* (1966): 7,432.

SATU BAHASA
SATU
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AGAL 152

UPI

MALAY NATIONALISTS protested the continued use of English as one of the official languages of Malaysia. Here, demonstrators are restrained by an officer at the prime minister's residence in Kuala Lumpur, on February 2.

MALAYSIA

In 1967, the first peaceful year of its 4-year existence, Malaysia became more concerned with internal problems. No longer confronted by threats from Indonesia, Malaysia lost much of the defense and development assistance previously provided by Britain, at a time when economic growth had slowed. Friction within Malaysia's pluralistic society was exemplified by a controversy over the national language and by strong states' rights movements in Sabah and Sarawak. However, the government of Prime Minister Abdul Rahman remained generally popular and regional cooperation and improved relations with Indonesia and the Soviet Union partially softened the blow of decreased British aid.

Economy. Serious economic difficulties plagued Malaysia in 1967. A sharp decline in world prices for its two principal exports, rubber and tin, adversely affected government revenues by reducing export duties. The government initiated a modest stockpile purchase plan and called for a conference of 13 rubber-producing countries to devise a rubber commodity agreement. A January report showed a tapering off in the nation's economic growth from the exceptionally high rate of 9.7% in 1965 to 6.3% in 1966 and a considerable deficit in balance of payments instead of the 1965 surplus of U. S.$55 million. The anticipated level of foreign assistance, especially from Britain, for the government's 5-year development plan had not been realized in its first year (1966–67), and a number of social welfare projects were curtailed.

Language Controversy. The National Language Act, later passed by the government, provoked serious controversy. To meet constitutional requirements, Malay was to become the sole official language effective September 1. But as a concession to the large non-Malay communities of Chinese and Indians in West Malaysia (the Malay Peninsula), Prime Minister Rahman announced that English would temporarily continue to be used for certain government purposes. Militant Malays, unwilling to defer the full official use of the national language, publicly demonstrated against the act in Kuala Lumpur, the capital, in February.

MALAYSIA • Information Highlights

ASIA
AUSTRALIA

Area: 128,430 square miles (332,632 sq km).
Population: 9,675,000 (June 30, 1966, est.).
Chief City (1963 est.): Kuala Lumpur, the capital, 316,230.
Government: *Paramount Ruler*—Sultan Ismail Nasiruddin Shah (took office Sept. 21, 1965); *Prime Minister*—Tunku Abdul Rahman (took office Sept. 16, 1963). *Parliament*—House of Representatives (Dewan Ra'ayat), 144 members (party seating, 1967: Alliance, 89; Alliance Sarawak, 24; Alliance Sabah, 16; Pan-Malayan Islamic party, 9; others, 6); Senate (Dewan Negara), 58 members.
Religious Faiths: Muslims, over 50% of population.
Education: *Literacy rate* (1960), 22.3% of population aged 15 and over. *Total school enrollment* (1965)—1,711,602 (primary, 1,380,920; secondary, 310,781).
Finance (1967 est.): *Revenues*, $628,200,000; *expenditures*, $610,000,000; *public debt* (1965), $814,300,000; *monetary unit*, Malaysian dollar (3.08 dollars equal U.S.$1).
Gross National Product (1966): $3,102,000,000.
National Income (1966): $2,117,000,000; average annual income per person, $218.
Economic Indexes: *Agricultural production* (1965), 151 (1956–57=100); *cost of living* (1966) 100 (1958=100).
Manufacturing (metric tons): Cement (1966), 783,600; gasoline (Sarawak, 1965), 470,000; palm oil (Malaya, 1965), 148,700; lumber (Sabah, 1965), 80,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Natural rubber, 1,000,800 (ranks 1st among world producers); rice, 914,000.
Minerals (metric tons, 1966): Tin, 6,999,600 (ranks 1st among world producers); iron ore, 5,856,000.
Foreign Trade (1966): *Exports*, $1,248,000,000 (chief exports, 1966: rubber, $478,000,000; tin, $257,000,000; timber, $151,000,000); *imports*, $1,097,000,000 (chief imports, 1965: nonelectrical machinery, $95,824,000; transport equipment, $92,864,000). *Chief trading partners* (1965): Singapore (took 23% of exports, supplied 11% of imports; Japan (took 18% of exports, supplied 10% of imports).
Transportation: *Roads* (1965), 11,027 miles (17,746 km); *motor vehicles* (1965), 227,198; *railways* (1965), 1,124 miles (1,809 km); *national airline*, Malayan Airways Ltd.
Communications: *Telephones* (1966): 131,668; *television stations* (1965), 8; *television sets* (1965), 53,000; *radios* (1965), 420,000: *newspapers* (1964), 30.

State Politics. In East Malaysia the first direct elections in Sabah precipitated an open split in the governing Alliance Sabah. In the initial slate-making, the member parties failed to agree on an equitable distribution of constituencies. This dispute resulted in electoral contests in 21 out of the 32 Assembly constituencies between the predominantly Muslim United Sabah National Organization (USNO) and the United Pasokmomugum Kadazan Organization (UPKO), whose members were mainly members of the Kadazan ethnic group. In two other districts, UPKO ran candidates against the much smaller Sabah Chinese Association (SCA). The campaign developed as a power struggle between USNO and UPKO. USNO maintained close relations with Abdul Rahman's Malay party in the central government, while UPKO was increasingly identified with a strong states' rights position.

In a close race held in April, USNO won 14 seats and UPKO 12; SCA held a pivotal position with 5 seats, and 1 independent was elected. Tun Mustapha, the USNO leader, announced in May that he would temporarily head a small cabinet composed only of USNO and SCA members until bad feelings engendered by the election subsided. UPKO then withdrew from the Alliance Sabah.

Political tensions remained acute in Sarawak. The response to the central government's January offer of amnesty to anti-Malaysia guerrilla fighters was poor, and the Communist underground remained active. Dato Stephen Ningkan's Sarawak National party (SNAP) remained alienated from the Alliance Sarawak and scored two by-election victories. Following the rupture in the Sabah alliance, Dato Donald Stephens, UPKO's leader, established contact with Ningkan, and a liaison committee was created by the two dissident parties. Both Stephens and Ningkan espoused states' rights positions and called for a looser relationship between Kuala Lumpur and the Bornean states.

Defense. A change in Malaysia's long-established defense policy was foreshadowed by Britain's announcement on July 18 of a gradual but complete withdrawal from its bases in Malaysia and Singapore by 1975. Britain had chosen the end of Indonesia's "confrontation" with Malaysia as an appropriate time for the virtual liquidation of its regional defense commitments.

To ease the impact, Britain promised Malaysia interim financial assistance in restructuring its defense forces and pledged continued adherence to the 1957 Anglo-Malaysian Defense Agreement. After 1975, Britain expected to maintain a vaguely defined mobile strategic reserve force for possible use in future Asian crises. Prime Minister Abdul Rahman indicated that a fresh defense agreement would be required with Malaysia's Asian and Pacific Commonwealth partners, and proposals were advanced for a regional defense conference.

Regional and Foreign Affairs. Malaysia became one of the five founding members—the others are Indonesia, Thailand, the Philippines, and Singapore—of a new regional economic grouping, the Association of Southeast Asian Nations (ASEAN). At the inaugural session in Bangkok, Thailand, Aug. 6–8, 1967, ASEAN members decided to confine their initial efforts to fostering economic and social cooperation. But their declaration that foreign bases in the region were only "temporary expedients" implied future attention to common defense arrangements.

Relations with Indonesia continued to improve with the resumption of full diplomatic relations on August 31. The Indonesian Army joined Malaysian forces in Borneo in searching for guerrilla holdouts. An important trade agreement with Indonesia, concluded in May, provided for strict state controls over future commercial exchanges. Earnings from Indonesian exports to Malaysia will be retained in a Malaysian bank and used to finance Indonesian exports to Malaysia.

Malaysia's trade relations with the Soviet Union are to be expanded under a treaty signed in April. Henceforth the Russians will be able to purchase Malaysian rubber, tin, and other products directly, bypassing the London and Singapore markets. The two governments agreed to exchange diplomatic missions, thus reinforcing Malaysia's newly flexible position toward relations with Communist states. But no immediate departure from its pro-Western policy was anticipated.

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MALDIVE ISLANDS

The Maldive Islands, an archipelago of some 2,000 islands in the Indian Ocean, are an independent state, known formally as the Sultanate of the Maldive Islands. They lie southwest of Ceylon, stretching some 600 miles (966 km) north from the equator.

The present head of state of the Maldive Islands is Sultan Al-Amir Mohamed Farid Didi I, who was elected for life and installed in 1954. Parliament, called the Majlis, meets in the capital city of Male. A prime minister (Amir Ibrahim Nasir) holds executive authority, and there is a cabinet responsible to the Majlis. The islands are divided, for administrative purposes, into 19 groups. There is an elected *kateeb*, or head man, for each group.

The principal industry of the Maldive Islands is fishing, and its chief export is "Maldive fish," a dried fish prepared from bonito. Copra and coir, both coconut products, are also exported.

Formerly a protectorate of the United Kingdom, the islands were granted independence in 1965 and joined the United Nations in the same year. The United Kingdom retains, by treaty, an air base on Gan Island in Addu Atoll. On May 4, 1967, Andrew V. Corry was appointed U. S. ambassador to the Maldive Islands and Ceylon.

MALI

Measures to improve Mali's economic condition continued to receive priority throughout 1967. The country agreed to implement steps leading to its gradual reintegration into the West African franc area, which it left 5 years earlier.

Economic Affairs. Following several years of worsening economic problems, the government recognized that the old currency had outlived its usefulness. The Mali franc was endangering economic growth by discouraging investment, decreasing purchasing power, and increasing living costs. After protracted negotiations, the government signed an agreement with France on February 15 providing for the progressive reentry of Mali into the West African franc area.

Soon after acceptance of the agreement the government devalued the Mali franc by 50% to a

MALI • Information Highlights

ASIA
AFRICA

Area: 463,947 square miles (1,201,625 sq km).
Population: 4,654,000 (July 1, 1966, est.).
Chief City (1963 est.): Bamako, the capital, 150,000.
Government: *President*—Modibo Keita (took office September 1960); *Parliament*—National Assembly, 70 members (all belonging to the Union Soudanaise party).
Religious Faiths: Muslim, 62% of population; tribal religions, 37%; Roman Catholic, 0.5%; other, 0.5%.
Education: *Total school enrollment* (1964)—157,285 (primary, 138,722; secondary, 16,632; teacher-training, 923; technical, 844; higher, 164).
Finance (1965–66 est.): *Expenditures,* $43,000,000; *monetary unit,* Mali franc (493.706 francs equal U.S.$1 as of May 5, 1967).
Crops (metric tons, 1964–65 crop year): Millet and sorghum, 661,000; cassava (1963–64), 160,000; rice, 130,000; peanuts (1966–67), 127,080; maize, 109,000.
Foreign Trade (1966): *Exports,* $13,130,000 (chief exports: cotton, $3,100,000; fish, $2,900,000; peanuts, $1,463,000); *imports,* $35,924,000 (chief imports, 1965: textile yarn and fabrics, $9,290,700; transport equipment, $4,977,450; sugar and honey, $4,884,300). *Chief trading partners* (1965): France (took 15% of exports, supplied 24% of imports); USSR (took 3% of exports, supplied 19% of imports); Ivory Coast (took 30% of exports, supplied 3% of imports).
Transportation: *Roads* (1965), 7,489 miles (12,050 km); *motor vehicles* (1965), 9,535 (automobiles, 4,522).
Communications: *Telephones* (1966): 4,800; *radios* (1964), 45,000; *newspapers* (1962), 3 (daily circulation, 2,000).

new exchange rate of 493.706 frances to U. S.$1. A series of monetary reforms and austerity measures was initiated to expand trade with neighboring states and to guarantee the reform's effectiveness with French financial and technical assistance. Mali also joined with other West African states on May 4 in an agreement to form a common market to eliminate customs barriers among themselves.

Foreign Aid. Foreign assistance made other tangible contributions to Mali's economic progress. The European Development Fund allotted over $1 million in production aid, intended chiefly as price support and production assistance for the nation's three major agricultural products—cotton, rice, and peanuts. Aid from the Soviet Union helped to exploit marble deposits, construct a cement factory, and prospect for minerals. The Soviets also delivered three MIG-17 jets and trained some 100 paratroopers.

Political Affairs. Mali's leaders were careful not to let economic "liberalism" go too far, and they reminded Malians of the country's essentially socialist orientation. President Modibo Keita dissolved the political bureau of the ruling Union Soudanaise party and assigned its powers to the Comité National de Défense de la Révolution, formed in 1966 but inactive until now. Several old-time officials were dropped from the new leadership group.

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MALTA

Maltese affairs in 1967 were dominated by problems arising from proposed reductions of British armed forces on Malta by 1968.

Because of Maltese fears about the effects of troop reduction on the Maltese economy (especially the problem of new employment for Maltese now working for the British military establishment), Herbert Bowden, then British secretary of state for Commonwealth affairs, visited Malta in January 1967 to discuss revised proposals extending the period in which the reduction would take place to 1970. But these proposals were unacceptable to the Maltese government. On January 27 it delivered an aide-mémoire to the British government asserting that Britain had broken its defense agreement with Malta (signed on Sept. 21, 1964). The Maltese government then introduced a bill in the Maltese Parliament amending the legislation under which British forces were allowed to be in Malta.

Patrick Gordon Walker, British minister without portfolio, visited Malta for discussions in February, and a Maltese delegation headed by Prime Minister Giorgio Borg Olivier was in London from February 26 to March 10. Despite further British concessions —including an extension to 1972 of the period in which the number of British-employed Maltese would be reduced, and the promise of additional economic aid—agreement was still not reached. On March 12, however, Borg Olivier announced that his government had decided to let the British plan go forward.

MALTA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 122 square miles (316 sq km).
Population: 318,000 (Aug. 31, 1966).
Chief City (1964 est.): Valletta, the capital, 17,872.
Government: *Sovereign*—Queen Elizabeth II. *Governor-General* Sir Maurice Dorman (took office Sept. 21, 1964). *Prime Minister*—Giorgio Borg Olivier (took office March 3, 1962, reelected March 28, 1966). *Parliament*—House of Representatives, 50 members (party seating, 1967: Nationalist party, 28; Malta Labour party, 22).
Religious Faiths: Roman Catholics, 97% of population.
Education: *Literacy rate* (1963), 80% of adult population. *Total school enrollment* (1964)—56,982 (primary, 47,000; secondary, 7,222; technical, 1,680; higher, 1,080).
Finance (1965–66 est.): *Revenues,* $60,460,000; *expenditures,* $60,000,000; *monetary unit,* pound (0.4167 pound = U. S.$1 as of Nov. 20, 1967).
Gross National Product (1966): $175,000,000.
National Income (1966): $148,000,000; average annual income per person, $465.
Cost of Living Index (1966): 119 (1958 = 100).
Manufacturing (metric tons, 1966): Wheat flour, 37,000.
Crops: Barley, beans, grapes, onions, potatoes, tomatoes.
Minerals (metric tons): Lime (1963), 16,000; salt (1964), 2,000.
Foreign Trade (1965): *Exports,* $24,220,000 (chief exports: textile yarn and fabrics, $6,815,200; synthetic yarn fibers, $4,569,600; clothing, $1,797,600; wine, $840,000); *imports,* $97,916,000 (chief imports: cereals, $7,145,600; textile yarns and fabrics, $6,941,200).
Chief Trading Partners: Britain (took 29% of exports, supplied 39% of imports); Italy (took 9% of exports, supplied 12% of imports; West Germany (took 3% of exports, supplied 4% of imports).
Transportation: *Roads* (1964), 565 miles (909 km); *motor vehicles* (1965), 29,200 (automobiles, 22,200); *merchant vessels* (1966), 6 (35,000 gross registered tons); *national airline,* Malta Airlines; *principal airport,* Luqa.
Communications: *Telephones* (1966): 23,732; *television stations* (1965), 1; *television sets* (1965), 26,000; *radios* (1964), 75,000; *newspapers* (1964), 7.

WIDE WORLD PHOTO

WINNIPEG, Manitoba, was host to the 5th Pan-American Games, held in July. Lighting of the official flame highlighted the opening ceremony.

Under the chairmanship of Lord Robens, a joint Anglo-Maltese economic mission was appointed to suggest ways to bolster the Maltese economy.

In November the Maltese pound was devalued at the same rate as the British pound.

Richard E. Webb
British Information Service

MANESCU, Cornelius. See biographical sketch under United Nations.

MANITOBA

The need for future revenue to finance expanding government programs continued to dominate Manitoba's economic and political life in 1967.

Economy. The legislative program outlined in December 1966 left little doubt that new taxes would be imposed to meet government costs, which had increased 18% in 1966–67. Premier Dufferin Roblin remained critical of federal authorities for the breakdown of federal-provincial negotiations on tax sharing. However, a 5% sales tax effective June 1, 1967, on a wide variety of consumer goods and services was expected to provide $45 million during a full fiscal year. Revenues for 1967–68 were estimated at $353 million and expenditures at $354.5 million.

Education. Education remained the greatest single item in government expenditure, being estimated at one third the total budget for 1967–68. In March a referendum was held in 33 school divisions on whether to consolidate single school districts. Although the government's proposal had the support of the three major parties, 19 divisions voted against consolidation in what seemed a major defeat for the administration. Observers held that the vote meant general criticism of the sales tax, increasing government costs, and cabinet salary increases.

A $95 million school expansion plan was offered by the government in January 1967, in fulfillment of Premier Roblin's 1966 election promise to ease the burden of municipal taxation on homeowners.

New Premier. In August 1967, Roblin announced his intention to resign the premiership and seek the national leadership of his Progressive-Conservative party. A provincial leadership convention was called for November 24, and the next day the Progressive-Conservative leadership of Manitoba was won by 38-year-old Walter C. Weir, minister of highways. He was sworn in as premier November 27.

Hartwell Bowsfield
York University, Toronto

MANITOBA • Information Highlights

Area: 251,000 square miles (650,091 sq km).

Population: 963,006 (1966 census).

Chief Cities (1966 census): Winnipeg, the capital, 257,005; St. Boniface, 43,214; St. James, 35,685; Brandon, 29,981; St. Vital, 29,528; East Kildonan, 28,796.

Government: *Chief Officers*—lt. gov., Richard S. Bowles; premier, Walter C. Weir (took office Nov. 27, 1967; Progressive Conservative); prov. secy., Stewart E. McLean (PC); atty. gen., Sterling R. Lyon (PC); prov. treas., Edward G. Evans (PC); min. of educ., George Johnson (PC); chief justice, C. C. Miller. *Legislature*—Legislative Assembly (57 members, 31 Progressive Conservative, 14 Liberal, 11 New Democratic party, 1 Social Credit party).

Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 218,770 pupils (8,975 teachers); private schools, 11,335 pupils (580 teachers); Indian (federal) schools, 6,069 pupils (233 teachers); college and university (fall 1966), 12,389 students. *Public school expenditures* (1963)—$71,885,000 ($376 per pupil).

Public Finance (fiscal year 1967 est.): *Revenues,* $217,220,000 (sales tax, $55,770,000; income tax, $66,026,000; federal funds, $34,485,000). *Expenditures,* $237,280,000 (education, $69,470,000; health and social welfare, $67,230,000; transport, communications, $40,800,000).

Public Assistance (fiscal year 1967 est.): $21,140,000 (chiefly to aged and blind, $2,820,000; dependents and unemployed, $11,350,000).

Manufacturing (1964): Value added by manufacture, $340,824,000 (printing, publishing and allied industries, $30,289,000; primary metals, $22,211,000; clothing industries, $26,888,000; paper and allied industries $25,281,000; food and beverages, $96,496,000).

Agriculture (1966 est.): *Cash farm income,* $374,161,000 (livestock, $168,653,000; crops, $200,449,000; govt. payments, $4,836,000). *Chief crops* (cash receipts)—wheat, $88,933,000 (ranks 3d among the provinces); flaxseed, $33,972,000 (ranks 1st); oats, $11,173,000 (ranks 1st); barley, $11,043,000 (ranks 3d); potatoes, $5,985,000 (ranks 5th).

Mining (1966 est.): *Production value,* $182,038,399. *Chief minerals* (short tons)—nickel, 58,171 (ranks 2d among the provinces); copper, 30,900 (ranks 4th); cement, 496,180 (ranks 5th); zinc, 35,816; sand and gravel, 12,821,244; crude petroleum, 5,257,000 barrels. (Ranked by value.)

Transportation: *Roads* (1965), 45,637 miles (73,430 km); *motor vehicles* (1965), 342,335; *railroads* (1966) 4,735 track miles (7,619 km); *licensed airports* (1966) 17.

Communications: *Telephones* (1965) 351,026; *television stations* (1967), 4; *radio stations* (1966), 14; *newspapers* (1966), 5.

MANUFACTURING. See Economic Review; Industrial Production.

MARCOS, Ferdinand. See biographical sketch under Philippines.

MARIHUANA. See Hallucinogenic Drugs.

MAO TSE-TUNG

Chairman of the Chinese Communist party: b. Hsiangtan, Hunan, Dec. 26, 1893.

Mao Tse-tung fought vigorously for his Great Proletarian Cultural Revolution in 1967. More and more the struggle was directed against top party leaders in opposition, notably Liu Shao-ch'i, chairman of the People's Republic of China. The revolution met with powerful resistance in the various provinces where anti-Maoist forces were deeply rooted. In an attempt to break the hold of these forces, the Red Guards, who had been organized by Mao in 1966 to carry out the cultural revolution, plunged China into turmoil. But they did not give Mao the firm control he sought.

Mao remained the supreme director of the cultural revolution, although his wife, Chiang Ch'ing, increasingly acted as his spokesman. The rumor that Mao was in poor health appeared to be unfounded. He led the parades at the 1967 May Day celebrations, took part in the National Day festivities on October 1, and received delegations throughout 1967.

The Personality Cult. Because of the strength of the party opposition, Mao made use of his popularity among the Chinese youth. The campaign to make him idolized reached a high point in 1967, when his portraits were displayed everywhere, and badges bearing his picture were worn by almost everyone. Excerpts from Mao's little red book of quotations were chanted by millions of Red Guards. "To hold aloft the red banner of Mao Tse-tung's thought" became the slogan of Communist China.

Revolutionary Tactics. Strong opposition from local party organizations, which had also organized their followers, made it necessary for Mao to resort to military force. In January 1967 he ordered the army to support the "left" masses in their struggle against the revisionists. This move resulted in the seizure of power by Maoists in a number of places, but also gave rise to new conflicts. Attempting to restore order and to reduce popular discontent caused by the indiscriminate attacks of the Red Guards, Mao called for collaboration between the "misled" masses and the cadres.

Foreign Policy. Mao continued in 1967 to support national and socialist revolutions. He denounced the Soviet policy of peaceful coexistence and condemned U. S. intervention in the Vietnam War. However, Mao did not minimize U. S. military power. There were many militant declarations, but Peking saw to it that China was not directly involved in the war.

The hard line of Mao's foreign policy caused China's isolation to grow. The violent activities of the Red Guards further impaired Communist China's relations with the Soviet Union, Britain, and various Southeast Asian countries, especially Burma.

Background. Mao joined the Chinese Communist party in 1921 and soon distinguished himself as a leader of the peasant movement and as a strategist of guerrilla warfare. In 1935 he assumed leadership of the party and 14 years later, when the Communists defeated the Nationalists, he became the ruler of mainland China.

Opposition to Mao's policies grew within the party as a result of the failure of the Great Leap Forward in 1958, the peasant discontent with the people's communes, and the growing isolation of Peking in world politics. Mao launched the cultural revolution in 1966 to defeat the opposition and to eliminate the influence of the "bourgeois reactionaries" on the ideological and cultural fronts.

EASTFOTO

MAO TSE-TUNG, despite rumors of his poor health, looked well and vigorous at 1967 May Day celebrations in Peking.

Chester C. Tan
New York University

MARINE BIOLOGY

The production and utilization of nutrients in the sea received considerable attention in 1967. It was found, for example, that marine zooplankton may be an important source of dissolved organic matter in the sea. K. L. Webb, of the Virginia Institute of Marine Science, and R. E. Johannes, of the University of Georgia Marine Institute, indicate that rates of release of dissolved free amino acids by zooplankton are a positive function of water temperature (greater at higher temperatures). Marine bacteria are particularly benefited by the common protein amino acids, such as glycine, taurine, and alanine, which are present in the products released by the zooplankton. An estimate of the amount of total dissolved amino acids released by zooplankton at a concentration of $0.03 g/m^3$ at 12° C is equal to the amount in solution in about one month.

Biomass of Microorganisms. A new method for determining the biomass of living cells in the sea was described by O. Holm-Hansen and C. R. Booth, of Scripps Institute of Oceanography. The method uses measurements of adenosine triphosphate (ATP), which is contained in all living cells, as an index of the amount of living material present. The measurements are useful for quantities of ATP down to less than a billionth of a gram (10^{-10} grams). The determination of the amount of ATP present is, in turn, based upon ATP activation of light in firefly luciferin-luciferase and is relatively easy to do. The data indicate an average of 6 million bacterial cells at depths of 600 to 3,360 feet (183 to 1,025 meters), which is 50 to 2,000 times greater than that determined by cultural techniques.

Conversion of Organic Material. A vital factor in the mineralization of organic matter (waste products, dead plants and animals) in the sea is the activities of marine bacteria. Natural seawater contains extremely low concentrations of organic matter (0.1 to 2.0 mg/liter of total dissolved carbon), compared with media commonly used for growing bacteria in the laboratory (at least 1,000 mg/liter of total dissolved carbon). Holger W. Jannasch, of the Woods Hole Oceanographic Institute, has determined the growth responses of several species of heterotrophic marine bacteria to limiting concentrations of lactate, glycerol, and glucose in seawater in a continuous culture apparatus (called a chemostat). Threshold concentrations of these limiting substrates were determined, below which the bacteria were unable to grow. A small amount of the limiting substrate is always left unattacked. Judging from these growth characteristics, two broad types of species were distinguished: (1) those adapted to the marine environment by their ability to grow at low substrate concentrations, and (2) an inactive population in natural seawater, which barely survives. Thus, the low, steady-state concentrations of organic substrates in the sea not utilized by bacterial oxidation may result from suboptimal levels for microbial utilization.

Another important contribution to the understanding of the mechanism of low-level organic substrate utilization in the oceans was presented by R. W. Sheldon, T. P. T. Evelyn, and T. R. Parsons, of the Biological Station at Nanaimo, B. C., who studied the size distributions of particulate matter in suspension in the Strait of Georgia, British Columbia. They indicate that particles (sometimes referred to as "marine snow") are not the result of settling from the surface, but are formed and reformed constantly in the water column. Bacterial activity is integral to the formation of the particles, which generally range from 2 to 4 microns in size. Many of these small particles are aggregations of bacteria, which may contribute to microbial survival in a low-energy environment and provide an important source of food for filter-feeding animals, particularly below the euphotic zone, the region where light penetrates.

GALEN E. JONES
University of New Hampshire

MARINE CORPS CHAPLAIN says last rites for a Marine fatally wounded in fighting near Con Thien, South Vietnam.

UPI

MARINE CORPS

For the third consecutive year, nearly a quarter of the U. S. Marine Corps was committed to combat operations in I Corps Tactical Zone (ICTZ) of Vietnam. This zone contains the five northern provinces and extends from the northern border of South Vietnam to a line crossing the country some miles south of Da Nang. The war in Vietnam continued to influence—or dominate—every aspect of Marine Corps life. There could be no better measure of Marine Corps professionalism than the manner in which it has solved the problems of keeping this high percentage of its strength in combat for a prolonged period.

Vietnam. The nature of the Marine combat operations in Vietnam changed perceptibly during the year. The ICTZ became the focus of enemy activity as the North Vietnamese army sought to take advantage of the shorter supply lines, rugged terrain, and sanctuary from ground attack available in the demilitarized zone (DMZ) between South and North Vietnam. North Vietnamese regular forces launched a series of attacks across the DMZ, employing units up to division size and committing hundreds of artillery pieces, mortars, and rockets to their bombardment effort.

To meet this threat, the III Marine Amphibious Brigade of the III Marine Amphibious Force shifted its 1st and 3d Marine Divisions northward, and heavy conventional combat ensued both in and below the DMZ. In February Marine units were authorized to fire their artillery against military targets both within and north of the DMZ. Outposts near the DMZ, such as Gio Linh and Con Thien, soon became entrenched fortresses, and a strip 600 meters (656 yards) wide was cleared—from the coast to the mountainous terrain inland. Installation of mine fields, barbed wire, and electronic detection devices was undertaken in an attempt to improve this giant anti-infiltration barrier. The 1st Marine Aircraft Wing added to its inventory of aircraft with a second squadron of A6A Intruders and a new squadron of CH-53 turbine-powered helicopters, and increased its operations to an average level of 5,000 fixed-wing and 30,000 helicopter sorties a month to support the intensified ground action.

Elsewhere in I Corps, the Marines continued counterinsurgency operations with good effect. The revolutionary development and pacification effort, a program in which specially trained South Vietnamese and American troops endeavor to protect villages against terrorist Vietcong attacks, continued to make slow but certain progress. (See also VIETNAM WAR.)

Through October 1967, Marine forces in I Corps killed 19,943 enemy personnel, captured 1,413, and received over 1,800 defectors. Marine casualties for the same period were 2,993 killed and 11,800 wounded seriously enough to require evacuation from the combat zone.

NEW MARINE COMMANDANT, Lt. Gen. Leonard Chapman, who received a fourth star and took command of the Marine Corps on Jan. 1, 1968, stands by as President Johnson announces his appointment at a news conference in December.

WIDE WORLD

Amphibious Forces. Marine landing teams served afloat with the Navy in the Caribbean, the Mediterranean, and in Far Eastern waters. In April a second Special Landing Force (SLF) was formed in the Seventh Fleet and placed on duty in the South China Sea. By year's end the two SLF's had been committed to over 20 separate combat operations in South Vietnam.

U.S.-Based Forces. Other Marine commands—a division-wing team on each coast and a brigade in Hawaii—served as a vast training pool supplying the bulk of the troops needed to support the individual rotation system in Vietnam. The 4th Marine Division, the Marine Corps' Ready Reserve unit, continued to maintain a small cadre on duty at Camp Pendleton, Calif., ready to direct mobilization should the unit be called to active duty.

Strength. The total number of Marines as of June 30, 1967, was 285,255. In early October there were approximately 75,000 Marines ashore in Vietnam. With the 13-month combat tour policy then in effect, the bulk of the corps had had at least one tour of duty in Vietnam.

Commandant. On Jan. 1, 1968, Lieutenant General Leonard F. Chapman received a fourth star and succeeded General Wallace M. Greene as commandant of the Marine Corps. Lt. Gen. Lewis N. Walt, former commanding general of III Marine Amphibious Force in Vietnam, was named as his assistant.

JOHN E. GREENWOOD
Lieutenant Colonel, USMC

MARRIAGE AND DIVORCE

The United States is in the beginning of a marriage boom that is expected to last for about 20 years. The accelerated upward trend became particularly apparent during the closing months of 1966. Marriage rates for the year were higher than for any time except for two years at the close of World War II. Total marriages in 1966 reached 1,859,000, an increase of 3.2% over the preceding year. Rates for the first half of 1967 were running even higher.

The increase in the marriage rate is due to the fact that children of the post-World War II birth boom are now reaching marriageable ages. Robert Parke, Jr., and Paul C. Glick, both of the U. S. Bureau of the Census, predict that the marriage rate will climb to about 12.6 per 1,000 population in the early 1980's, compared with the present rate of 9.4 per 1,000.

The divorce rate remained the same in 1966 as in 1965—2.5 per 1,000 population. The number of divorces increased by 13,000, or 2.7%. Rates were running slightly higher for 1967 based on statistics for the first six months. Parke and Glick, however, predict a decline in the U. S. divorce rate due to increased prosperity, since high divorce rates are linked with poverty. Another factor is the drop in teen-age marriages, which have a high casualty rate.

U.S. MARRIAGE AND DIVORCE DATA: 1961–67

Year	Number of marriage licenses	Rate per 1,000 pop.[1]	Change in rate	Number of divorces	Rate per 1,000 pop.	Change in rate
1967	1,920,000[2]	9.6	2.0%	519,000[2]	2.6	4.0%
1966	1,859,000[3]	9.4	3.2%	494,000[3]	2.5	2.7%
1965	1,789,000	9.2	2.2%	481,000	2.5	7.2%
1964	1,720,000	9.0	2.3%	445,000	2.3	0.0%
1963	1,651,000	8.8	3.5%	431,000	2.3	4.5%
1962	1,582,000	8.5	0.0%	406,000	2.2	−4.3%
1961	1,555,000	8.5	0.0%	414,000	2.3	0.0%

[1] Based on population excluding armed forces overseas. [2] Estimates based on first six months. [3] Provisional.

Canada. Marriages broke all previous records in Canada in 1966, reaching a total of 155,596, a rate of 7.8 per 1,000 population.

Divorces increased in Canada from 8,941 in 1965 to 10,215 in 1966, and the rate rose from 0.46 per 1,000 population in 1965 to 0.51 in 1966.

PAUL H. LANDIS
University of Arizona

MARSHALL, Thurgood. See SUPREME COURT.

MARYLAND

Change—in and through state governmental structure—characterized the year 1967 in Maryland. A new administration under Republican Gov. Spiro T. Agnew, a newly apportioned legislature with an 8 to 1 majority of new members, and the meeting of an elected constitutional convention proved to be major elements in spurring and shaping innovations.

Fiscal Reform. On the recommendation of a bipartisan executive-legislative committee, the legislature enacted a major tax reform bill that established a graduated state income tax and authorized both grants-in-aid to local governments and the levying of local income surtaxes up to 50% of the graduated state rate. Immediate results included nearly $100 million in grants for local programs, enabling many communities to hold the line on soaring property tax rates. Increased state revenues also permitted a $15 million pay rise for state employees and the financing of much-needed new programs.

New Programs and Reforms. Combined executive-legislative efforts resulted in the enactment of major new or extended state programs and regulations in many areas. Among these were laws pertaining to air quality control, water pollution and sewage treatment, strip mining control and reforestation, driver education and traffic safety, incentive grants for kindergarten and school construction, and statewide cultural-educational television.

The state's first fair housing legislation was passed; public accommodations laws were extended; and the law banning interracial marriage was repealed. The legislature also passed stringent revolving credit and second mortgage provisions and created a division of consumer protection.

Constitutional Reform. Maryland's first constitutional convention in more than a century met in September to rewrite the state's much-amended constitution. H. Vernon Eney, chairman of a preceding constitutional commission, was elected president, and former Gov. J. Millard Tawes, who had appointed the commission, was made honorary president.

Numerous proposals had been approved by year-end. Among these were proposals to lower the voting age from 21 to 19, require legislative reapportionment every 10 years, and unify the executive branch by prescribing 20 major departments (to replace the more than 200 units now in existence) and granting the governor wide reorganization powers.

Also significant, and more controversial, are proposals that would require major political subdivisions (the city of Baltimore and the 23 counties) to adopt home rule charters and assume virtually exclusive power to enact local laws. This would limit the legislature to general, or statewide, legislation and dramatically change a deep-rooted tradition of close state-local control. The proposed constitution goes before the voters on May 14, 1968.

Racial Tension. Outbreaks of racial violence in Cambridge, on Maryland's Eastern Shore, during the summer did not lead to major disorders in Baltimore, as many had feared. Combined state and local efforts to promote civil order included organization of a Cambridge committee to expedite aid and action in that city and authorization of a $480,000 job program in the city of Baltimore.

(See also BALTIMORE.)

JEAN E. SPENCER
University of Maryland

MARYLAND • Information Highlights

Area: 10,577 square miles (27,394 sq km).
Population: 3,685,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Annapolis, the capital, 27,500; Baltimore, 925,000; Dundalk, 85,000; Silver Spring, 80,000; Bethesda, 76,000; Wheaton, 63,000; Towson, 48,500.
Government: *Chief Officers*—governor, Spiro T. Agnew (Republican); secy. of state, C. Stanley Blair (R); atty. gen., Francis B. Burch (Democrat); treas., John A. Luetkemeyer; supt. of pub. instr., James A. Sensenbaugh; chief justice, Hall Hammond. *Legislature*—General Assembly (convened January 1967): Senate, 43 members (8 Republicans, 35 Democrats); House of Delegates, 142 members (25 R, 117 D).
Education: *School enrollment* (1965–66)—public elementary, 455,647 pupils (16,342 teachers); public secondary, 330,008 pupils (14,752 teachers); nonpublic, 152,400 pupils (5,650 teachers); college and university (fall 1965), 98,594 students. *Public school expenditures* (1965–66)—$397,630,000 ($566 per pupil); average teacher's salary, $6,878.
Public Finance (fiscal year 1966–67): *Revenues*, $1,827,303,892 (3% sales tax, $135,974,016; motor fuel tax, $90,472,213; federal funds, $127,577,656). *Expenditures*, $1,822,371,237 (education, $317,963,663; health, welfare, and safety, $199,337,890; highways, $295,469,135). *State debt*, $442,168,000 (June 30, 1967).
Personal Income (1966): $11,573,000,000; average annual income per person, $3,204.
Public Assistance (fiscal year 1967): $85,709,680 to 129,995 cases (aged, $10,056,294; dependent children, $40,045,801).
Labor Force (employed persons, June 1967): *Agricultural*, 30,700; *nonagricultural* (wage and salary earners), 1,324,900 (21.4% manufacturing, 20.2% trade, 16.7% government). *Unemployed persons* (June 1967)—50,600.
Manufacturing (1965): Value added by manufacture $3,342,878,000 (transportation equipment, $327,747,000; primary metals, $542,679,000; nonelec. machinery, $172,961,000; elec. machinery, $290,861,000; food and products, $475,676,000).
Agriculture (1966): *Cash farm income*, $338,044,000 (livestock, $226,106,000; crops, $106,423,000; govt. payments, $5,515,000). *Chief crops* (tons)—hay, 559,000; corn for grain, 549,472; wheat, 133,920; barley, 93,984.
Mining (1966): *Production value*, $74,161,000. *Chief minerals* (tons)—sand and gravel, 15,108,000; stone, 13,868,000; bituminous coal, 1,222,000; clays, 856,000; lime, 29,447; natural gas, 696,000,000 cubic feet.
Fisheries (1966): *Commercial catch*, 82,703,791 pounds ($14,012,308). *Leading species*—blue crabs, 31,850,032 pounds ($2,933,362); oyster meats, 12,068,785 pounds ($7,861,846); striped bass, 3,119,425 pounds ($2,949,200).
Transportation: (1966): *Roads*, 23,360 miles (37,593 km); *motor vehicles*, 1,540,669; *railroads*, 2,000 track miles (3,219 km); *airports with scheduled service*, 44.
Communications: (1966): *Telephones* (1967), 1,942,200; *television stations*, 4; *radio stations*, 78; *newspapers*, 13.

MASSACHUSETTS

At his inauguration on January 5, Gov. John A. Volpe became the first governor of Massachusetts elected for a 4-year term (under a constitutional amendment lengthening the term of major state officers from 2 to 4 years, beginning with the 1966 election). Previously, Governor Volpe had served two terms—1961–63 and 1965–67. The most important measures passed by the 1967 session of the General Court (legislature) were those reorganizing the public welfare system, effective July 1, 1968, and providing a $94 million tax program to finance the reorganization and meet other needs of the state.

Legislation. Under the measure reorganizing the welfare system, the responsibility for administering welfare programs, as well as the local share of the costs, is shifted from the cities and towns to the state. The tax program, which was signed by Governor Volpe in December, increases individual state income taxes from 3.075% to 4% and corporate income taxes from 6.75% to 7.5%. It also cuts in half the 100% deduction formerly allowed for federal income taxes. The tax measure will have the effect of shifting costs from property taxes to income taxes, since it is expected that savings on welfare will enable communities to lower their property levies.

Through other legislative action the 3% sales tax passed in 1966 was made permanent and the 12

GOV. JOHN A. VOLPE and outfielder Carl Yastrzemski celebrate after the Boston Red Sox won the American League race.

UPI

congressional districts were realigned. On December 20, the legislators elected Democrat John F. X. Davoren, speaker of the House of Representatives, as secretary of state. He succeeds Kevin H. White, who was elected mayor of Boston on November 7.

Correctional Facilities. During the year there was frequent controversy over the treatment of persons imprisoned as criminally insane. In February, Albert H. DeSalvo—who has said that he is the "Boston Strangler," responsible for murdering 13 women between 1962 and 1964—and two other inmates escaped temporarily from the mental hospital of the Massachusetts Correctional Institution at Bridgewater. DeSalvo had been convicted on January 18 and sentenced to life imprisonment on charges of armed robbery, assault, and sex offenses. The escape, together with a motion picture that represented conditions for the inmates as very poor, caused much discussion, but no definite action was taken.

MASSACHUSETTS • Information Highlights

Area: 8,257 square miles (21,386 sq km).

Population: 5,421,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Boston, the capital, 670,000; Worcester, 180,000; Springfield, 174,000; Cambridge, 104,000; New Bedford, 98,500; Fall River, 94,000; Newton, 93,000.

Government: *Chief Officers*—governor, John A. Volpe (Republican); lt. gov., Francis W. Sargent (R); secy. of state, John F. X. Davoren (Democrat); atty. gen., Elliot L. Richardson (R); treas., Robert Q. Crane; comr. of educ., Owen B. Kiernan; chief justice, Raymond S. Wilkins. *Legislature*—General Court (convened Jan. 4, 1967): Senate, 40 members (14 Republicans, 26 Democrats); House of Representatives, 240 members (71 R, 167 D, 1 Independent, 1 vacancy).

Education: *School enrollment* (1965–66)—public elementary, 647,500 pupils (24,500 teachers); public secondary, 417,500 pupils (19,600 teachers); nonpublic, 290,900 pupils (10,930 teachers); college and university (fall 1965), 211,251 students. *Public school expenditures* (1965–66)—$517,000,000 ($530 per pupil); average teacher's salary, $7,100.

Public Finance (fiscal year 1967): *Revenues*, $1,414,043,587 (3% sales tax, $128,105,900; motor fuel tax, $115,761,437; federal funds, $317,604,816). *Expenditures*, $1,371,621,527; (education, $217,645,948; health, welfare, and safety, $429,806,868; highways, $207,071,318). *State debt*, $818,909,000 (June 30, 1967).

Personal Income (1966): $17,675,000,000; average annual income per person, $3,271.

Public Assistance (fiscal 1967): $206,845,357 to 240,032 recipients (aged, $44,186,567; dependent children, $52,727,087).

Labor Force (employed persons, July 1967): *Agricultural*, 20,000; *nonagricultural* (wage and salary earners), 2,143,700 (31.9% manufacturing, 20.6% trade, 13.5% government). *Unemployed persons* (July 1967)—124,700.

Manufacturing (1965): Value added by manufacture, $7,327,404,000 (transportation equipment, $342,289,000; primary metals, $257,332,000; nonelectrical machinery, $832,873,000; electrical machinery, $1,087,516,000; fabricated metals, $529,388,000; food and products, $520,680.000).

Agriculture (1966): *Cash farm income*, $171,509,000 (livestock, $93,338,000; crops, $77,537,000; govt. payments, $634,000). *Chief crops* (tons)—Cranberries, 38,400 (ranks 1st among the states); potatoes, 67,000; apples, 60,000.

Mining (1966): *Production value*, $38,473,000. *Chief minerals* (tons)—sand and gravel, 17,321,000; stone, 6,424,000.

Fisheries (1966): *Commercial catch*, 375,953,346 pounds ($40,133,015). *Leading species*—scrod haddock, 78,236,430 pounds ($8,461,784); yellowtail flounder, 57,452,609 pounds ($7,154,893); large haddock, 35,631,627 pounds ($5,245,811).

Transportation: *Roads* (Dec. 1966), 27,401 miles (44,088 km); *motor vehicles* (1966), 2,206,486; *railroads* (1966), 3,268 track miles (5,258 km); *airports with scheduled service* (1967), 8.

Communications (1967): *Telephones* (1966), 2,871,000; *television stations*, 12; *radio stations*, 58; *newspapers*, 46.

The Economy. The overall economy of the state continued at a high level. Although manufacturing jobs decreased by 11,000 from September 1966 to September 1967, nonmanufacturing jobs increased by 31,500. The bulk of the increase came in services and government employment. Geographically, the gains were largest in the Boston metropolitan area, and the declines most marked in the Fall River and New Bedford areas.

Education. During the year the trustees of the state colleges drew up plans for substantial expansion of institutions under their jurisdiction. In the public school system, collective bargaining between teachers and local school committees increased greatly (under a 1966 law allowing all public employees the rights to such bargaining). Although teacher strikes remained illegal, there was a 4-day shutdown in Lawrence schools in September.

Antiwar Activities. A number of demonstrations against the Vietnam War were held, including burning of draft cards. Other demonstrations, the largest one organized by high school students in Wakefield, supported the opposite view. On October 25, a Dow Chemical Company job recruiter was blockaded in a room at Harvard University and prevented from leaving for several hours. As a result, 74 students were placed on disciplinary probation.

At the municipal election in Cambridge on November 7, the voters of that city rejected by more than 3 to 2 a petition urging "prompt return home of American soldiers from Vietnam." Cambridge was one of two major communities in the nation (the other being San Francisco) holding a referendum on Vietnam on that date.

Crime. On May 23, three masked gunmen stole a Brink's armored truck, carrying more than $600,000, at a Brockton shopping plaza and escaped after transferring the loot to another vehicle. On April 1, three robbers hijacked an armored truck at a Quincy shopping center and escaped with almost $400,000, part of which was recovered the next day. Neither crime had been solved at year's end.

(See also BOSTON.)

GEORGE D. BLACKWOOD
Boston University

MATHEMATICS

The designation of Truman Botts as the first full-time director of the Conference Board of the Mathematical Sciences (CBMS) points up the rapid growth, broadening scope, and increasing effectiveness of professional organizations in the mathematical sciences. The member organizations of the Conference Board are:

- American Mathematical Society—concerned with scholarship and research in mathematics.
- Association for Computing Machinery—concerned with the sciences and arts of data and information processing.
- Association for Symbolic Logic—concerned with research in mathematical logic and related fields.
- Institute of Mathematical Statistics—concerned with the development, dissemination, and application of mathematical statistics.
- Mathematical Association of America—concerned with collegiate mathematics.
- National Council of Teachers of Mathematics—concerned with elementary-school and secondary-school mathematics.
- Society for Industrial and Applied Mathematics—concerned with the applications of mathematics in industry and science.

In 1967 the status of affiliate membership in the CBMS was created, and three organizations became affiliate members, the Operations Research Society, the Society of Actuaries, and the Institute of Management Sciences.

Most of the member organizations publish professional journals and hold national meetings. Several of these organizations also publish technical books and hold state or regional meetings to provide their members with as many opportunities as possible to discuss common problems.

The Conference Board of the Mathematical Sciences was incorporated in 1960 and represents a new stage in the formal cooperation of the American Mathematical Society and the Mathematical Association of America. Previously they had joined in the War Policy Committee (1942–45), the Mathematical Policy Committee (1945–58)—ultimately including also the Association for Symbolic Logic, the Institute of Mathematical Statistics, the National Council of Teachers of Mathematics, and the Society for Industrial and Applied Mathematics—and the Conference Organization of the Mathematical Sciences (1958–60). Many mathematicians belong to more than one of these organizations.

The activities of the Conference Board of Mathematical Sciences are under the direction of a Council composed of two representatives of each member organization and one representative of each affiliated organization. The work of the CBMS is financed by dues from the constituent organizations and aided by a grant from the Carnegie Corporation.

New approaches to mathematics are based upon constantly increasing horizons of mathematical concepts and applications. Professional organizations based upon the voluntary efforts of numerous users, developers, and creators of mathematical ideas serve as catalysts in the continued growth of mathematics and the dissemination of information regarding mathematical sciences.

Bruce E. Meserve
University of Vermont

MAURITANIA

In 1967, Mauritania continued to seek a closer association with "revolutionary" countries, while retaining bonds with "moderates." At home, political opposition was effectively squelched.

Foreign Affairs. In the Middle East crisis, Mauritania supported the Arabs and broke diplomatic relations with the United States. President Mokhtar Ould Daddah attended the "little summit" in Cairo, demanding effective sanctions against Rhodesia. The government pursued claims to "Spanish Mauritania," and Spain agreed to strengthen relations with Mauritania.

The president underlined his role as a link connecting black and white Africa with visits to Senegal, Guinea, Gambia, Liberia, Algeria, Tunisia, and Egypt. Mauritania decided to open an embassy in Communist China, and China agreed to aid in rice cultivation and to build a radio transmitter. Mauritania also signed its first commercial agreement with the Soviet Union.

Internal Affairs. A government crisis followed the arrest of Ahmed Baba Miske, former UN ambassador, on charges of "mismanagement." Political and cultural leaders who protested were suspended from their posts and expelled from the ruling party. Nonetheless, Miske subsequently was released.

Investments exceeded forecasts. Exploitation of a large copper deposit was expected to modernize the economy.

W. A. E. Skurnik
University of Colorado

MAURITANIA • Information Highlights

ASIA
AFRICA

Area: 397,850 square miles (1,030,700 sq km).
Population: 1,100,000 (Dec. 31, 1966 est.).
Chief City (1965 est.): Nouakchott, the capital, 15,000.
Government: *President*—Mokhtar Ould Daddah (took office for 2d 5-year term Aug. 7, 1966). *Parliament*—National Assembly, 40 members (all belonging to Parti du Peuple Mauritanien).
Religious Faiths: Muslims, 99% of population; Roman Catholics, 0.3%; others, 0.7%.
Education: *Total school enrollment* (1964)—20,774 (primary, 19,103; secondary, 1,380; teacher-training, 107; technical, 184).
Finance (1964 est.): *Revenues,* $15,500,000; *expenditures,* $16,300,000; *monetary unit,* CFA franc, (246.85 francs equal U. S.$1).
Gross Domestic Product (1964): $1,230,180,000.
Chief Crop (metric tons, 1965): Dates, 5,000.
Minerals (metric tons): Iron ore (1965), 5,999,480; salt (1964), 600.
Foreign Trade (1964): *Exports,* $45,906,000 (chief export: iron ore); *imports,* $15,748,700 (chief imports, 1964; non-electrical machinery, $3,674,000; railway vehicles, $2,879,000; motor vehicles, $1,673,000). *Chief trading partners* (1964): France (took 37% of exports, supplied 55% of imports); U. S. (took 1% of exports, supplied 19% of imports); West Germany (supplied 12% of imports).
Transportation: *Roads* (1964), 3,669 miles (5,905 km); *motor vehicles* (1965), 4,100 (automobiles, 1,500); *railways* (1963), 419 miles (674 km); *national airline,* Air-Mauritanie; *principal airport,* Nouakchott.
Communications: *Telephones* (1966): 900; *radios* (1964), 31,000; *newspaper,* *Mauritanie Nouvelle,* weekly.

MAURITIUS

The election in August was the chief event of 1967 for Mauritius. The victory of Premier Seewoosagur Ramgoolam's party ended his 20-year campaign for independence. A new constitution went into effect, and the British colony was scheduled to become an independent member of the Commonwealth of Nations on March 12, 1968.

Elections. Elections were held on Aug. 7, 1967, and 82% of the electorate voted. The victorious Independence party (IP)—a coalition of the Mauritius Labour party, the Independent Forward Bloc, and the Muslim Committee of Action—polled 54% of the vote and returned 39 candidates. The opposition Parti Mauricien Social Democrate (PMSD), which favors association with Britain, won 23 seats. Eight reserved seats were divided equally between the IP and PMSD. On August 22 the Mauritian Legislative Assembly unanimously passed a resolution to request that Britain grant independence.

Parties in Mauritius to a large extent are based on ethnic groups. The Mauritius Labor party and the Independent Forward Bloc draw their support from the Hindu laborers. In the elections, the IP returned 31 Hindus, 5 Muslims, and 3 members of the general population (a category including Creoles and Europeans). The PMSD is supported by wealthy Creoles and French and returned 13 members of the general population, 5 Muslims, 3 Hindus, and 2 Sino-Mauritians.

MAURITIUS • Information Highlights

ASIA
AFRICA

Area: 809 square miles (1,865 sq km).
Population: 768,692 (Dec. 31, 1966 est.).
Chief City (Dec. 31, 1966 est.): Port Louis, the capital, 134,000.
Government: Governor—Sir John Shaw Rennie (took office Sept. 17, 1962); *Prime Minister*—Sir Seewoosagur Ramgoolam (took office March 12, 1964). *Parliament*—Mauritius Legislative Assembly, 70 members (party seating, 1967: Independence party, 43; Parti Mauricien, 27).
Religious Faiths: Hindus, 48% of population; Roman Catholics, 28%; Muslims, 16%; others, 8%.
Education: *Literacy rate* (1962), 61.6% of population aged 13 and over. *Total school enrollment* (1966)—171,732 (primary, 136,944; secondary, 34,788).
Finance (1966 est.): *Revenues*, $39,942,000; *expenditures*, $44,940,000; *public debt*, $54,684,000; *monetary unit*, rupee (4.762 rupees equal U. S.$1; as of Nov. 21, 5.555 rupees equal to U. S.$1).
Gross National Product (1966): $167,790,000.
Cost of Living Index (1966): 105.9 (1962=100).
Manufacturing (metric tons, 1965): Sugar (1966), 562,000; molasses, 149,400; beer, 2,800; lumber, 3,000 cubic meters.
Crops (metric tons, 1966): Sugarcane, 4,842,900; tea, 1,974.
Foreign Trade (1966): *Exports*, $70,896,000 (chief exports: unrefined cane sugar, $64,344,000; tea, $1,386 000); *imports*, $69,930,000 (chief imports: rice, $7,875,000; petroleum products, $3,108,000; nonelectrical machinery, $2,730,000). *Chief trading partners:* Britain (took 74% of exports, supplied 27% of imports); South Africa (took 4% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 1,152 miles (1,854 km); *motor vehicles* (1966), 21,123 (automobiles, 11,761).
Communications: *Telephones* (1966): 13,634; *television sets* (1966), 5,895; *radios* (1966), 65,662; *newspapers* (1965), 11 (daily circulation, 1963, 76,000).

Constitution. The new constitution went into force on August 12, and under its terms the Governor appointed Sir Seewoosagur Ramgoolam prime minister. The constitution guarantees human rights and provides for an ombudsman to investigate complaints against the government. Parliament is composed of three universally elected representatives from each of the 20 constituencies and eight members who are chosen by a representative procedure. Two other seats go to the dependency of Rodrigues.

Internal Affairs. Riots accompanied the August elections, and one Independence party supporter was killed. There was also rioting in October, when 10,000 relief workers were dismissed by the government as an economy measure. Mauritius is suffering from economic difficulties because of a drop in the price of sugar.

Economy. Sugar and its by-products account for 97% of domestic exports and nearly 40% of the national income. The island imports most of its foodstuffs, particularly rice, which is the largest import both in quantity and in value.

Mauritius announced its devaluation of currency on November 21. There are now 5.555 rupees to U. S. $1.

Population. Overpopulation continues to be the most serious problem facing Mauritius. The population increases by nearly 3% every year and density is over 1,000 per square mile.

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MEAT INDUSTRY

Americans consumed an average of 170.5 pounds of meat per person in 1966. This included about 104 pounds of beef, 58 pounds of pork, 4.5 pounds of veal, and 4 pounds of lamb and mutton.

U. S. meat production in 1966 totaled 32.6 billion pounds—almost equal to the record high of 32.7 billion pounds in 1964 and a gain of more than 1 billion pounds over 1965. Included in the 1966 production were 19.7 billion pounds of beef, 11.3 billion pounds of pork, 900 million pounds of veal, and 700 million pounds of lamb and mutton.

Sales of the meat industry totaled $18 billion in 1966. Net earnings were $125 million, less than one cent per dollar of sales.

Meat-packing is one of the nation's largest industries. More than 4 million farmers and ranchers produce the livestock processed at 4,500 meat-packing and -processing plants. Meat is sold in the United States at an estimated 232,000 retail outlets, supplied by about 5,000 wholesale distributors. The sale of livestock accounts for about one third of the total cash income of farmers and ranchers.

The meat industry has been able to find many uses for animal by-products. Hides, lard, tallow, pharmaceuticals, and other by-products are sold to recover some production costs that otherwise would be added to the price of meat.

Federal inspection is mandatory for meat that moves between states. In December 1967 the President signed a new Federal Meat Inspection Act that provides federal assistance to states to establish meat inspection systems equal to that of the federal government. The federal inspection system will take over in any state that does not comply with the new law within from two to three years.

HERBERT B. BAIN
American Meat Institute

MEDICINE

(Left) LOUIS WASHKANSKY is shown in December 1967 after he became the world's first human heart transplant patient. He died of pneumonia 18 days after surgery.

WIDE WORLD

MEDICINE

The year 1967 was an important one in the medical sciences, with major events ranging from fundamental advances in basic biological research to the development of new drugs and methods for treating certain diseases. In addition, potent social and economic forces were brought to bear on problems concerning medical education, medical care, and government-sponsored health programs. In the field of surgery, the most outstanding event was the first human heart transplant operation (see SURGERY).

In the basic sciences, the synthesis of biologically active deoxyribonucleic acid (DNA) and the determination of the molecular structure of a key cellular enzyme, ribonuclease (RNase), represented major advances. RNase is a protein containing over 1,000 atoms in a chain of 124 amino acid units. Clarification of its structure is an important step toward the understanding of structure of proteins in general, the activity of enzymes, and regulation of cell growth. It also may help lead to synthesis of the enzyme, which so far has been only partially achieved.

The synthesis of active viral DNA, in effect a laboratory-made virus, represents the closest approach man has made to the shadowy zone between chemical synthesis and creation of life. Although DNA was synthesized some years ago, it was not capable of reproducing itself. The recently synthesized DNA, which was achieved by assembling the proper enzymes and chemical components with a "starter" of natural DNA to serve as a template, could replicate itself and infect bacterial cells, directing them to form new virus. (See GENETICS.)

MEDICAL EDUCATION

During 1967 much attention was focused on the serious shortage of physicians and paramedical personnel in the United States. Consequently, at its annual meeting in June, the American Medical Association (AMA) called for energetic measures to increase the number of medical graduates, and it established a new Division of Medical Education. The AMA proposed that an increase could be accomplished by expanding existing schools, building new ones, and converting schools of osteopathy into medical colleges.

Some progress was made in 1967 toward increasing the number of physicians, as the number of medical school graduates increased to 7,743, up 169 from the class of 1966. Total enrollment for 1966–67 increased to 33,423, compared with 32,835 in 1965–66. During 1967 approximately 9,280 first-year students enrolled in medical schools, an increase of 316 over 1966. Much of this increase was due to the opening of five new medical schools. In addition, it was estimated that 2,377 U. S. citizens were working toward medical degrees in foreign schools during 1966–67.

Other new medical schools are in the planning stage, and 32 existing schools were aided by federal grants to expand their facilities. It now is estimated that by 1975, the new and expanded schools will be graduating approximately 10,000 doctors annually. Whether or not this rate will be sufficient to meet needs remains to be seen. It will depend on the rate of population growth, future private and governmental demands for medical services, and the number of foreign graduates licensed.

MEDICAL CARE

In May 1966, President Johnson appointed the National Advisory Commission on Health Manpower with the directive that it seek ways "for improving the availability and utilization" of health-care personnel. The Commission's report, which was announced in the fall of 1967, contained recommendations for sweeping changes in medical practice and the operation of hospitals. The shortage of health-care personnel was pointed out, but the need to "improve the system through which health care is provided" was also emphasized. The commission was careful to avoid a "federal plan for national health care," but suggested improved organization (as in group practice) and "a judicious combination of peer groups [of physicians, etc.] with government agencies and . . . the use of incentives, to encourage improvement of quality, greater efficiency and reduction of costs."

The wide variation in operating efficiency of hospitals was also cited in the report. One large hospital reported that operation of all departments 7 days per week had increased efficiency, saved money, and lessened the need for new facilities. The commission suggested that physicians should be given increased responsibilities for economical and successful management of hospitals, while regulating standards of high quality medical care.

Rapidly increasing costs of health care caused much concern in 1967. It was reported that physicians' fees rose 6.8% and hospital daily charges rose 19.1% during the first 6 months of the year. A special report to the President from the Department of Health, Education and Welfare pointed out that there had been a 41% increase in the demand for physicians' services from 1950 to 1965, although the number of doctors had increased only about 33% during that time. This indicated that physicians had increased their productivity to meet demands and had increased their fees. On the other hand, the rapid increase in wages of employees, which accounts for two thirds of hospital costs, had not been offset by any measurable increase in productivity.

On recommendation of the commission's report, a National Conference on Medical Costs was held in Washington. Again, greater efficiency and better organization of health care facilities were advised. Also recommended was the revision of health care policies to cover preventive measures and office medical care, instead of restricting benefits to hospitalized patients.

GOVERNMENT HEALTH PROGRAMS

United States. Medicare completed its first year of operation on June 30, 1967, and in general the program ran smoother than had been expected, although the cost was higher than had been anticipated, due partly to the rising hospital charges. Figures from the Social Security Administration (SSA) indicated that costs for the first year were about $3.2 billion and that some 12 million persons, about two thirds of those covered, used Medicare services. Of these, 4 million received hospital care; the others received supplemental benefits in the voluntary part of the program that provides partial payment of doctors' fees and services.

Medicaid programs for low income groups continued to cause difficulties during 1967. Two additional states had plans approved during the year, bringing the total number of participating states to 30. However, some states, notably California, accumulated large deficits, and it was estimated that New York alone would require more federal funds than had been estimated for the entire program for the first year.

In December, both Medicare and Medicaid were considerably revised along with other Social Security programs. Some benefits were liberalized and attempts were made to simplify the administration of the program. For example, physicians were relieved of the difficult responsibility of certifying that hospitalization of patients is a "medical necessity."

More stringent restrictions were placed on the Medicaid program to reduce its cost. Beginning on July 1, 1968, in order to receive federal support, state Medicaid plans must limit eligibility to individuals who do not earn more than 150% of the maximum annual cash welfare benefit paid by the state. By Jan. 1, 1969, this limit will be reduced to 140% and then to 133% on Jan. 1, 1970.

The Health Insurance Institute announced that benefits paid by private health insurance carriers in 1966 reached a new high of nearly $5.6 billion. The largest single category was $2.3 billion spent for hospital expenses. (See also INSURANCE.)

Great Britain. In Britain, the National Health Service (NHS) for free medical care continued in serious difficulties. In spite of some salary increases for doctors, most general practitioners continued underpaid and vastly overworked, and physicians urged that all except needy patients be asked to pay a small fee for each visit to decrease demands for unnecessary services. Some British doctors conduct private practice to supplement their income, and voluntary health insurance coverage has become increasingly popular. Some physicians, however, resigned from the NHS, and others emigrated to foreign countries. This trend has magnified the difficulties for those doctors who remain, especially general practitioners.

Junior hospital physicians, roughly equivalent to interns and residents in the United States, were particularly vehement in their objections to their low pay and lack of effective representation in the British Medical Association. Their demonstration temporarily disrupted the annual meeting of the BMA.

Finally, on Jan. 16, 1968, Prime Minister Harold Wilson announced cuts in social welfare benefits, education, and housing. The medical program was affected to the extent that patients now will be charged for prescriptions, except in hardship cases. However, the public was warned that other belt-tightening measures will be needed, and these may further influence the concept of free medical care.

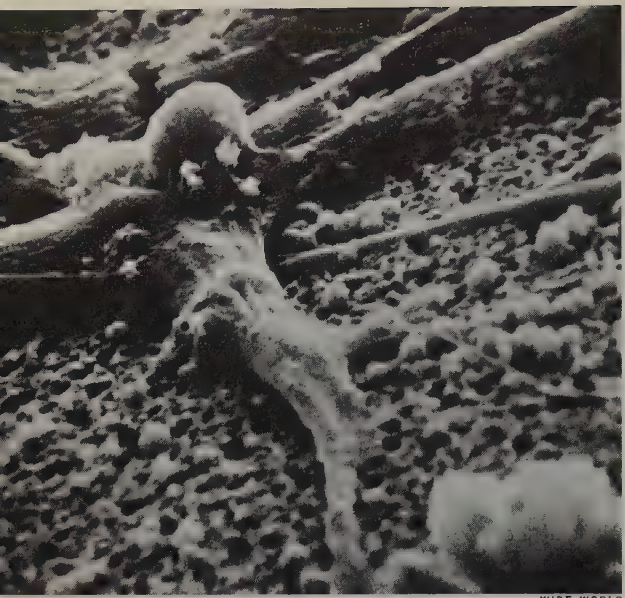
France. In France, due to an $800-million deficit in the social security system, it was necessary to reduce medical benefits and increase salary taxes in 1967. Formerly, patients were reimbursed for 80% of the fees they paid to physicians. This figure was reduced to 70%. Doctors' fees were not changed, although practitioners considered them to be low.

Canada. The proposed Canadian version of Medicare still was in a state of confusion at the end of 1967. The program was scheduled to begin July 1967 but was postponed until July 1968 for economic reasons. Under this plan, the federal government is to pay 50% of the costs of health care plans of the provinces, provided the plans meet required standards of very broad coverage. However, several provinces were reported to doubt their ability to pay their share of the expected expense, or were hesitant to convert less extensive plans to the federal program. Widespread opposition among physicians was reported, and further delay was suggested.

DRUGS

In 1967 there was much controversy between U. S. government agencies and committees on the one hand and physicians and drug manufacturers on the other hand concerning the manufacture, testing, and distribution of drugs. It was charged that the Federal Drug Administration (FDA) regulations governing clinical testing of new drugs are unnecessarily restrictive, interfere with development of new drugs, and in some details "defy practical interpretation." Particular concern was expressed over a new interpretation by the FDA of the doses and uses of drugs. It was claimed that the FDA-approved dosages recommended in package literature are virtually binding upon physicians and that exceeding these doses would render the physician liable for adverse reactions suffered by the patient.

Another debate concerned the relative value and costs of brand name versus generic drugs. Generic drugs may be manufactured and distributed by any pharmaceutical house after the original patent has expired, or after signing a licensing agreement with the patent holder. Drug companies that discover and patent major new drugs maintain that they charge more for these drugs because they have invested the expense of research and development and because they contend that their standards of quality control are higher. Congressional committees have been investigating the higher costs of brand name products. The attempt was made in one case to attach an amendment to the 1967 Social Security



WIDE WORLD

ROOTLIKE EXTENSIONS of a cancer cell were first seen through a stereoscan electron microscope by scientists at the Chester Beatty Research Institute in England.

law restricting prescriptions purchased by federal funds to the less expensive generic drugs, but the proposal failed.

New Drugs. Among the new drugs released in 1967 were two that lower blood levels of fat and cholesterol. One of these drugs, Atromid-S, interferes with the synthesis of cholesterol in the body, while the other Choloxin (dextrothyroxine), hastens the breakdown of cholesterol in the liver. The latter drug is a derivative of thyroid hormone and is usually contraindicated when cardiovascular disease or hypertension (high blood pressure) are present.

Talwin (pentazocine) and Levoprome (methotrimeprazine) are new nonaddicting pain-relieving drugs that are administered by injection. A milder analgesic drug, Ponstel (mefenamic acid), may be given by mouth for less severe types of pain.

Other new preparations included Vibramycin, a broad-spectrum tetracycline antibiotic, and Garamycin (gentamycin), which has been said to be effective in treating staph infections. New semisynthetic penicillins were also under development, and one substance, myambutol, showed promising results for the treatment of tuberculosis.

One example of the way in which a drug's unexpected side effects can be useful in treating disease was furnished by the anticonvulsant drug Elipten (amino-glutethimide). The drug was first introduced for the treatment of epilepsy, but it had to be with drawn because it suppressed the formation of adrenal gland hormones. However, this toxic side effect was put to good use in the treatment of adrenal gland tumors and other types of hyperadrenalism.

Hallucinogens. The use and abuse of hallucinogenic drugs have increased rapidly in recent years. Marijuana, the most widely used substance, is apparently capable of producing effects varying from mild elation to severe hallucinations and serious emotional reactions, depending upon the potency and dose of the drug.

At present, marijuana is classified as a narcotic, and there are severe penalties for its possession or sale. Technically, however, the drug is not a true narcotic agent, and the legality of this classification has been challenged in the courts. There has been some sentiment to place marijuana, along with other hallucinogens, under the drug abuse regulations of the FDA and to control the drug by concentrating on the sources of manufacture and distribution.

LSD is a more potent and dangerous drug. Reports of adverse psychological reactions and psychiatric illness following its use have been increasing. Also, damage to chromosomes has been noted in users of LSD, and similar chromosomal abnormalities were noted in three of four infants whose mothers had used the drug during pregnancy. A new hallucinogenic drug known as STP was also reported in use during 1967. It was identified as 2,5 dimethoxy-4-methylamphetamine, a chemical related to amphetamine and mescaline. (See also HALLUCINOGENIC DRUGS.)

CANCER

The National Advisory Cancer Council of the Department of Health, Education, and Welfare states in its report for 1967 that nearly 900,000 Americans were under treatment for cancer during the year and that more than 300,000 cancer patients had died. In spite of greatly increased research, the number of deaths due to cancer continue to climb. However, the report noted encouraging progress in cancer treatment, citing that 30 years ago fewer than 1 in 5 cancer patients survived while today the ratio is 1 in 3.

Major efforts in cancer research include basic studies of the causes of cancer and the development of new methods of detection, drugs, and treatment techniques. Particular attention is being paid to the role of immune reactions in resistance to cancer, genetic factors responsible for malignant growths, and to the possible role of viruses in causing the disease. Educational programs bearing on the prevention of cancer (especially the relationship between smoking and lung cancer) and early detection are being promoted. The routine use of the "Pap" smear to detect cervical cancer and chest X-rays to detect lung cancer is of great importance.

While the incidence of stomach cancer has been unexplainably decreasing, there has been an increase in cancer of the breast. Special X-ray techniques (mammography) have been developed to detect breast tumors too small to be found by palpation. It has also been reported that abnormal patterns of excretion of certain hormones in the urine have been detected in some women who later developed breast cancer. It is hoped that this technique may be used to indicate individuals who are unusually prone to this form of cancer.

In the area of treatment there has been encouraging progress in the management of leukemia, especially the type that occurs in children. A cure has not been achieved but the survival time for leukemic children has been increased through the use of combinations of anticancer drugs. Among the new experimental drugs of this type are at least three antibiotics—anthramycin, dactinomycin, and streptozotocin—and an enzyme, L-asparaginase. This enzyme works by destroying readily available supplies of the amino acid L-asparaginase, which is necessary for the growth of some types of malignant cells. (See also CANCER.)

INFECTIOUS DISEASES

Progress continued in the development of vaccines for the prevention of many viral infections. A live-virus vaccine for mumps was released at the end of 1967, and the number of cases of measles declined sharply during the year due to the new vaccine against that childhood disease. Almost complete eradication of measles is the ambition of public health authorities. Progress was also made toward the development of a vaccine for rubella (German measles), and it is hoped that the vaccine may be available by the end of 1969. A new, milder smallpox vaccine was developed. This vaccine should be useful for vaccinating children with eczema where the use of the standard vaccine is hazardous.

There was a slight increase in the number of polio cases in the United States during 1966—41 cases over the previous year's total of 61. This increase was attributed to complacency on the part of the public and the failure to use the available vaccines. An interesting development during 1967 was the discovery of a new disease with symptoms similar to those produced in polio. The disease, which was reported in Mexico, occurred in children who had been vaccinated against polio, and the polio virus could not be found in the children. It is still not known whether the disease was caused by another viral agent.

By the end of 1967 there had been sizable outbreaks of influenza in 23 states. However, the infection did not appear to be very severe or to be building toward a major epidemic. (See also RESPIRATORY DISEASES.)

In Germany a highly virulent virus was identified after it had caused the deaths of seven laboratory technicians who had been working with green monkeys used as laboratory animals. Another puzzling agent was described in England as the cause of scrapie, a chronic disease of the nervous system of sheep. The agent appeared to be smaller than known viruses and was viewed by some scientists as an infectious protein or a "minivirus."

In the area of treating virus diseases, further work on interferon has attracted much attention. Interferon is a protein made by body cells in response to the presence of viruses, and it helps to increase the body's resistance to viral infection. Methods of preparing large quantities of interferon or stimulating its production in the body have been sought for many years. It now has been found that certain types of double-stranded ribonucleic acid (RNA) stimulate interferon production inside cells. Similar results were obtained from a special penicillin extract and a synthetic substance. Although these experiments were performed with animals, not humans, there is hope that further discoveries concerning interferon will eventually lead to a practical method of treating viral infections.

IMMUNITY

Immune reactions were called to public attention in 1967 by one of their more spectacular manifestations, the rejection phenomenon which occurs after heart and other organ transplantation operations. Basically, immune reactions are intended to protect the body against the invasion of foreign substances, whether viruses, bacteria, or tissues. Hence, when organs are transplanted (except between identical twins) the foreign tissue is apt to stimulate the recipient's immunity reactions to attack the new tissue. Thus, suppression of the recipient's immune reaction by drugs or radiation is usually necessary. Such suppression, however, also lessens the person's resistance to infection, and the borderline between an effective suppressant dose and one that will permit a fatal infection to occur is exceedingly narrow. It is significant, in this connection, that the first human heart transplant patient died of pneumonia.

Another immunological problem under study is "autoimmune disease," a condition in which an individual's tissues may be attacked by his own antibodies. In such cases, antibodies against certain bacteria or other agents may mistake body tissues for their intended targets.

NERVOUS AND MENTAL DISEASES

Chronic degenerative diseases of the nervous system, such as multiple sclerosis, often have been regarded as autoimmune diseases. Additional evidence supporting this theory was reported in 1967. However, the possible role of small, slow-acting viruses or subviral particles is also being considered, and it is thought that they may act as a stimulus to the body's formation of the damaging antibodies. In one experiment, sheep were injected with brain tissue from patients with multiple sclerosis. After a period of months the sheep developed a disease very similar to scrapie. (See above, *Infectious Diseases.*)

Also in 1967 new experimental approaches were made in the treatment of parkinsonism (paralysis agitans) and myasthenia gravis. In treating parkinsonism, attempts were made to overcome a deficiency of an amino acid (DOPA) in the brain by administering the needed substance. Some improvements in the patients' symptoms were reported, but the dosage of the amino acid was limited by undesirable side effects. Fairly satisfactory drugs have been available for treating myasthenia gravis, but all of these drugs produce unwanted side effects.

Use of crude extracts of the plant hellebore was dropped years ago because of the severity of the reactions these substances produced. Now a purified alkaloid, germine diacetate, has been prepared from the plant. Trials indicate that it may be of considerable value in managing the disease, either alone or in combination with the drugs usually used. The side effects produced by germine diacetate are said to be minimal.

The number of patients in mental hospitals reached a record low of 422,000 in 1967, a decrease of nearly 7% since 1955, when the widespread use of tranquilizers and other psychotropic drugs began. The use of these drugs allows many patients to receive short-term drug therapy and then to be discharged to the care of community centers.

The number and variety of drugs used in treating emotional disorders continued to increase in 1967. One of the new drugs, Navane (thiothixine), was reported to be useful in treating chronic schizophrenia. Efforts to discover a biochemical basis for this condition are also continuing. One recent concept classified the disorder with the autoimmune diseases in the belief that the body creates antibodies against certain of its own brain cells. Another study reports the finding of a chemical in the urine of schizophrenic patients which, when administered to experimental animals, produces effects similar to those caused by the hallucinogen mescaline.

(See also HEART DISEASE; NOBEL PRIZES; and the Index entry, *Medicine.*)

JAMES PAISLEY HENDRIX
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MENTAL HEALTH

Psychiatrists and other professionals in the field of mental health were able to report some progress in treatment of mental illness during 1967. At the same time they showed growing concern for the problems of violent behavior, drug addiction, and alcoholism.

International Conferences. Two major international meetings were held in 1967: The 25th International Psychoanalytic Congress at Copenhagen on July 24–28 and the Eighth International Congress on Psychotherapy in Wiesbaden on August 21–26. The Wiesbaden meeting emphasized social psychiatry, a subspecialty concerned with the sociocultural factors related to mental illness and its treatment. The Copenhagen meeting addressed itself to the main theme of "acting out." By this term psychiatrists understand behavior arising from conflicts that cannot be faced and solved internally by an individual. Instead, he acts on his impulses, although this often leads him into conflict with the environment. Addiction is one important example of this sort of behavior.

The Problem of Violence. Encouraging signs came from both conferences in reports of a measure of success with many treatment methods. On the other hand, there was a lack of reports of significant research into the causes of violent and destructive behavior, whether in the form of riots, crime, or war. Little scientific study of violence has been done.

One noteworthy exception is found in the work of the Lemberg Institute for the Study of Violence at Brandeis University. Its staff has established systematic "case histories" of civil disturbances which provide a firm basis for the investigation of underlying causes.

U. S. Community Health Centers. The U.S. government continues to look to the medical professions generally, if not to mental health specialists in particular, to help alleviate inner city problems. Antipoverty programs continue, but without the momentum of earlier years because of uncertainty about financial support on the federal level.

An exception is the Community Health Centers Program, which has progressed beyond the halfway mark toward the 1970 goal of 500 centers. Two hundred fifty-six centers have been approved by the National Institute of Mental Health and have shared a total of $125,000,000 in federal funds. These centers will serve about 41,000,000 persons. Alaska and South Dakota are the only two states without grants.

Only one third of the centers are located in cities with populations over 50,000. Each center must provide five basic services: inpatient care; part-time hospitalization; outpatient treatment; emergency services; and consultation and education services for other community agencies.

Hospital Treatment. The mental hospital patient population continued a downward trend, dropping to 452,000 in 1966. This represents a decline of 4.8% in that year alone and a steady decrease of 19% over the previous 11 years, although the U. S. population increased 20% during the same period. Psychoactive drugs, active psychotherapeutic programs for individual patients and for patient units, and the establishment of psychiatric beds in over 1,000 general hospitals in the past two decades all have contributed to this decline in chronic hospitalization. This improvement has been accomplished without any fundamental clarification or discovery concerning the basic causes of the major psychoses.

The role of the general hospital in mental health planning was spelled out by the American Hospital Association in two resolutions formulated by a conference of mental health specialists and hospital officials. The two principal recommendations are as follows: First, maintaining optimal health requires attention to the psychosocial aspects of all medical problems within the hospital as well as in the community. Second, each hospital must develop a written plan for the development of mental health service within the hospital and beyond its walls.

Use of Drugs by Young People. One current problem is the use and abuse of addictive drugs, a problem compounded as a health issue by the illegality of these agents. The problem is not limited to college campuses, where some 5% to 10% of students may be habitual users of addictive agents, but involves also many youngsters of high school age.

Beyond this, police officials have reported a tremendous increase in runaways. It is assumed that most of these boys and girls have gone to the well-publicized colonies of alienated youngsters who seek solace, thrills, and meaningful experiences through drugs.

The magnitude of the problem is not easy to assess, but the waste of talent, the educational loss, and the potential health dangers are considerable. A clinic established in the Haight-Ashbury district in San Francisco found that only 10% of ill health in the area was directly caused by drugs. Infections were rampant, including hepatitis and venereal diseases. A very few incidents of violence in this population have pointed up the dangers of drug abuse more effectively than admonitions by educators, counselors, psychiatrists, or parents.

Habitual marihuana smokers tend to develop what has been called psychological addiction. They are not addicted in the sense that they suffer bodily distress if deprived of the drug, but they become emotionally dependent on the drug to help them avoid work, study, and other responsibilities. This dependence is detrimental to their mental health.

Moreover, the use of marihuana may lead to the use of more harmful agents, especially LSD. One reason for this risk is the proneness of those who habitually use marihuana to reach for more potent drugs. Another reason is the fact that much of what is sold as marihuana is contaminated with amphetamine, LSD, methedrine, or opiates. (See also HALLUCINOGENIC DRUGS.)

Alcoholism. The drug problem that threatens a small percentage of adolescents and young adults remains minor when compared with alcoholism. About 4% of the adult population suffers from alcoholism. One third of high school students also drink with some regularity. Of all males admitted to psychiatric services for the first time, 22% are alcoholics, and alcohol plays a role in one half of all fatal automobile accidents. The long-standing indifference toward this problem is illustrated by the fact that 1967 marked the first time that alcoholism was mentioned in a presidential health message, and only in late 1966 was the National Center for Prevention and Control of Alcoholism established by the National Institute of Mental Health.

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MERCHANT MARINE. See SHIPPING

METALLURGY

The metallurgical industries in the United States produced an adequate supply of most metals to meet the needs of the civilian economy and the large military requirements in 1967, but copper, nickel, and silver were in short supply. Research in metallurgy was highlighted by advances in metal-coating processes and studies of superplastic alloys.

Copper, Nickel, and Silver Supplies. Strikes and political disturbances in some major copper-producing areas were responsible for the copper shortage in 1967. Because the present mines will be seriously depleted in 10 to 15 years, an active search was being made for new deposits and for new metallurgical processes that will allow economic use of lower-grade materials.

Labor troubles in the Canadian nickel mines and an increase in consumption from about 500 million pounds a year in the non-Communist world in 1962 to about 840 million pounds in 1966 led to a short supply of nickel. To meet the increasing demand, the International Nickel Company constructed a new mill and began development of four new mines in Ontario and three in Manitoba.

The removal of silver from U. S. coins has not solved the silver supply problem. The U. S. government in 1967 ceased to maintain the price of silver at $1.29 per troy ounce and began selling silver to the highest bidder. (See also SILVER.)

Metal-Coating Processes. The metal-coating process used to join copper-nickel alloy layers to the copper core of dimes and quarters is also being used by Texas Instruments to clad aluminum wire with copper. The coated wire is lighter and less expensive than solid copper and can be substituted for it in many electrical uses.

Vapor deposition attracted attention as a large-scale method for producing thin coatings of aluminum or chromium on sheet steel. Special sealed rollers are used to pass clean strip steel continuously into a high-vacuum evaporation chamber where the coating material is vaporized and deposited on the steel. Steel companies set up pilot production lines using vapor deposition to produce coated steel for product evaluation.

Canadian researchers reported that gold electroplate 0.00001 inch (0.000025 cm) thick effectively blocks the entrance of hydrogen into steel. When applied to high-strength steel before cadmium plating, the gold coating is said to eliminate embrittlement of the steel caused by hydrogen.

A high-temperature, molten-salt electrodeposition process called Metalliding was announced by the General Electric Research and Development Center. This process, which results in a surface layer alloyed with the base metal, can be used to produce a hard-surface alloy on softer metals, or to produce oxidation-resistant coatings on reactive metals.

Superplasticity. Some alloys, when deformed at certain rates and in certain temperature ranges, can stretch out like chewing gum and be tremendously deformed without breaking. This superplastic behavior is being studied to understand superplasticity and to put it to industrial use. In one experiment, a superplastic zinc-aluminum alloy was drawn into a die to reproduce the complex shape of the IBM "Selectric" typewriter head. Accurate reproduction of the type letters was obtained.

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METALS. See CHEMISTRY; METALLURGY; MINING; and articles on the major metals (ALUMINUM, COPPER, GOLD, etc.).

METEOROLOGY AND CLIMATOLOGY. See WEATHER.

METHODIST CHURCH

The year 1967 marked a period of exceptional ecumenical activity for the Methodist Church.

The union of the Methodist Church and the Evangelical United Brethren Church received final approval, and the union is to become official in April 1968 in Dallas, Texas. The new denomination, to be known as the United Methodist Church, will have a membership of approximately 11,000,000. Membership in the Methodist Church now stands at more than 10,300,000, and the Evangelical United Brethren (EUB) Church has a membership of about 750,000. The two uniting churches have a common Wesleyan background and theology and very similar church polity and administration.

A result of the Methodist-EUB union will be the elimination of the Methodist Church's segregated administrative structure for Negroes, the Central Jurisdiction. Segregated annual (regional) conferences may be continued for a few years, but the union abolishes the separate Negro jurisdiction.

The Methodist Church's national organizations of both college students and campus ministers voted in 1967 to merge with interdenominational bodies. The National Conference of the Methodist Student Movement voted to phase itself out and merge with the new ecumenical University Christian Movement, a decision that will require final approval from the Methodist General Conference, which meets in April 1968. The Association of College and University Ministers of The Methodist Church voted to unite with the National Campus Ministry Association, a decision which needs no further approval.

The Methodist Church and the Evangelical United Brethren Church both continued as participants in the Consultation on Church Union, in which 10 denominations are seeking to develop a plan of union that would form a new united church of more than 25,000,000 members. Three Negro Methodist denominations are also among the participants in this consultation. They are the African Methodist Episcopal Church, African Methodist Episcopal Zion Church, and Christian Methodist Episcopal Church.

Progress toward union of the British Methodist Church with the Church of England was delayed when the final report of the joint unity commission was postponed from February 1968 to mid-April. This means that British Methodism's final decision will not come before 1969, a spokesman said.

Representatives of the Methodist and Roman Catholic churches announced after their third meeting that they had made positive strides toward a fuller understanding of each other's position and had found a "hopeful basis of future dialogue."

Methodists of the state of Georgia announced plans to erect a statue of John Wesley, English founder of Methodism. It will be in Savannah, Ga., the port city where Wesley served as a missionary in 1736.

The Methodists of Brazil celebrated their centenary year in 1967.

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Commission on Public Relations and Methodist Information, The Methodist Church

UPI

DÍAZ ORDAZ, Mexican president, and President and Mrs. Johnson at El Paso on October 28, when the United States returned a strip of 437 acres to Mexico. Johnson's image is reflected in monument marking the border.

MEXICO

The continuing economic boom highlighted developments in Mexico in 1967. The midyear congressional and gubernatorial elections saw the expected overwhelming victory of the dominant Institutional Revolutionary Party (PRI). Incidents of violence in various parts of the country occasioned considerable discussion, but seemed to reflect local conditions rather than a national pattern of discontent.

Economic Growth. The economy continued to move ahead during the first nine months of 1967, with production promising to equal the excellent growth rate of 7% achieved in 1966. Wages and salaries continued to rise faster than prices, while private investment continued the strong recovery it had made in 1965–66, when it reached 57% of total investment (Mexican sources supply over 90% of the total.)

Mexico ran a heavy international trade deficit, up 75% in the first half of 1967 over the corresponding period of 1966; imports were up 10.2% and exports down 5.4%. Nearly the whole increase was in the public sector, although the private sector continued to account for 77% of imports. Tourist income made up much of the loss from the trade deficit, however, with 1,370,000 visitors spending nearly $1 billion in the country. Hotel and other construction was stimulated in 1967 by expectations of a new peak of tourism in October 1968, when the Olympic Games will be held in Mexico City.

Economic Policy. The government continued to encourage private enterprise within a framework of government regulation and guidance. The 1967 budget—at 55.5 billion pesos ($4.3 billion), a 6% increase over 1966—was reassuring to business. The major part of the budget, 62%, was for government enterprises and decentralized agencies, which supply over one half the revenues of the Mexican government. Of the 38% of the budget directed to general expenses, the largest expenditures were in the area of economic development, with 35.7% of allotments going to promotion of industry and commerce and 16.4% to communications and transportation.

The government continued its large-scale distribution of land to farmers. The total for the first half of the Díaz Ordaz administration reached 21.17 million acres (8.61 million hectares) by September 1967. The government also continued its drive to slow industrial growth in the Federal District around Mexico City by encouraging industry elsewhere.

Economic nationalism continued as a conspicuous government policy. The Ministry of Commerce and Industry issued a revised list of 500 "new and necessary" industries for private investors to enter. The Mexicanization of mining had reached the point in 1967 at which 80% of production came from companies majority-owned by Mexicans. The government continued its attempts to spur Mexican trade within the Central American Common Market.

Elections. Elections were held on July 2, 1967, for 178 seats in the national Chamber of Deputies and for the governorships of several states. The ruling Institutional Revolutionary Party (PRI) won the seven governorships at stake and all the contested congressional seats.

The government conducted an extensive registration drive that produced a total of 15,790,000 voters. On the whole, the opposition campaign was quiet. The conservative National Action Party (PAN) was the largest and most active of the opposition groups. The Popular Socialist Party and the Party of the Mexican Revolution were quiet.

The greatest excitement of the elections was created by factionalism within the PRI. The major dispute occurred in the big, prosperous northwestern state of Sonora. A group of PRI leaders in that state objected to the national directorate's selection of Faustino Félix Serna, a wealthy Sonoran, as nominee for governor. Some of the opposition probably was founded on Félix's record as an incorruptible mayor, which suggested he would not be malleable as governor. However, the opposition was also against the centralization of party power in Mexico City.

Beginning in February, there were violent demands for the resignation of Félix's friend and supporter, the incumbent PRI governor Luís Encinas Johnson. By spring, the opposition to Félix involved widespread strikes and agitation by students, and on April 18 the State University of Sonora was closed because of absenteeism. Months of disorder, with considerable destruction of property, culminated on May 14 in gun battles between police and mobs in which some 20 persons were wounded. The governor and state legislature appealed to the national government for aid, and federal troops quickly restored order on May 18. Félix was elected governor in July and inaugurated in September.

GUSTAVO DÍAZ ORDAZ, president of Mexico since Dec. 1, 1964, maintained his country's active participation in the Organization of American States, as well as its diplomatic and trade relations with the Castro regime of Cuba, during 1967. On a visit to Washington, D. C., in October, he reaffirmed Mexico's friendship with the United States. On the domestic scene, Díaz Ordaz continued to carry out policies of economic and social reform. His Institutional Revolutionary Party was victorious in all 178 contested legislative seats and in seven state governments in national elections on July 2.

Díaz Ordaz was born on March 12, 1911, in Chalchicomula (now Ciudad Serdán), in the state of Puebla. A law graduate of the University of Puebla in 1937, he held several judicial posts before returning to the university as a member of the law faculty. He entered national politics as a deputy in the legislative assembly in 1946 and later became a senator. In 1952 he was appointed director general of judicial affairs in the interior ministry. He served as minister of the interior from 1958 until his election as president of Mexico on July 5, 1964.

UPI

Dissidence and Disorder. Another outbreak of violence occurred in August in Acapulco, perhaps the most luxurious resort area of Mexico. The incident, which involved a struggle for control of the Regional Copra Producers Union, culminated in a gun battle involving over 500 coconut farmers and union members and resulted in a death toll of 33. The state government, aided by federal troops, restored order, but the melee resulted in the downfall of one of Mexico's prominent politicians, Amador Hernández of the PRI, who was implicated in the union struggle.

Numerous other incidents of violence involved students, but the issues were so varied and local as to make it apparent that no national pattern existed, except one of activism among students. Rioting over local issues occurred at universities in Ciudad del Carmen, Saltillo, Durango, and Puebla (the Puebla incident, involving rivalry between Catholic and leftist factions, resulted in the resignation of the university rector). It is probably significant that students at the huge and prestigious National University at Mexico City declined requests to support efforts of students at other universities.

International Relations. Mexico played an important role in securing agreement by 21 nations at Mexico City in February to a treaty creating the world's first nuclear-free zone in Latin America.

Relations with the United States continued to be good in 1967. In June, after long discussion, the two nations arrived at a textile agreement permitting Mexico to export 75 million square yards (62.7 million square meters) of textiles annually to the United States. This was considerably less than textile exports to the United States in 1966, but at least eliminated the Mexican fear that the exports would be forbidden altogether. Agreement was also reached between the United States and Mexico in July on a flood control project for the Tijuana River.

On October 27, President Gustavo Díaz Ordaz paid a state visit to Washington, D. C., and the next day he and President Johnson took part in ceremonies at El Paso, Texas, which formally restored to Mexico the El Chamizal area claimed by Mexico for over a century.

Disaster. In a tragic mishap in Tijuana in September, more than 30 persons, mostly children, died of poisoning when the insecticide parathion got into the ingredients used to make bread.

ROBERT JONES SHAFER
Syracuse University

MICHENER, Roland. See biographical sketch under CANADA.

MEXICO • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 761,895 square miles (1,972,546 sq km).
Population: 45,671,000 (July 30, 1967 est.).
Chief Cities (1965 est.): Mexico City, the capital, 3,192,804; Guadalajara, 1,048,351; Monterrey, 821,843; Ciudad Juárez, 385,082.
Government: *President*—Gustavo Díaz Ordaz (took office Dec. 1, 1964). *Congress*—Senate, 60 members (party seating, 1967: Institutional Revolutionary party, PRI, 60); (name of 2d house:) Chamber of Deputies, 210 members (party seating, 1967: PRI, 178; others, 32).
Religious Faiths: Roman Catholic, 94% of population.
Education: *Literacy rate* (1960), 65% of population aged 15 and over. *Total school enrollment* (1965)—7,961,927 (primary, 6,916,204; secondary and technical, 848,756; teacher-training, 63,561; higher, 133,406).
Finance (1967 est.): *Revenues*, $1,716,700,000; *expenditures*, $1,768,660,000; *public sector debt* (1966), $1,803,265; *monetary unit*, peso (12.5 pesos equal U. S.$1).
Gross National Product (1966): $21,768,000,000.
National Income (1966): $19,680,000,000; average annual income per person, $446.
Economic Indexes (1966): *Industrial production*, 186 (1958=100); *agricultural production* (1965), 181 (1956–57=100); *cost of living*, 123 (1958=100).
Manufacturing (metric tons, 1966): Cement, 4,908,000; gasoline (1965), 4,525,000; crude steel, 2,724,000; sugar, 2,323,700; beer (1965), 1,024,700; aluminum, 21,120; lumber, 1,515,000 cubic meters.
Crops (metric tons, 1966): Wheat (1967), 2,000,000; sorghum, 1,341,000; citrus fruit, 1,139,800; cottonseed (1967), 957,800; dry beans (1965), 945,000; tomatoes, 529,000; potatoes (1965), 436,000; coffee (1965), 178,200.
Minerals (metric tons, 1966): silver, 42,036,436 troy ounces (ranks 2d among world producers); fluorspar, 725,388 (world rank, 1st); barite, 291,484 (world rank, 3d); crude petroleum, 17,988,000; iron ore, 2,700,000; sulfur, 1,700,711.
Foreign Trade (1966): *Exports*, $1,228,480,000 (chief exports: cotton, $221,920,000; coffee, $83,840,000; zinc, $44,960,000; lead, $27,600,000; *imports*, $1,605,200,000 (chief imports, 1965: nonelectrical machinery, $421,538,400; transport equipment, $242,175,200; motor vehicles, $197,941,600). *Chief trading partners* (1965): U. S. (took 57% of exports, supplied 66% of imports); West Germany (took 3% of exports, supplied 7% of imports); Japan (took 7% of exports, supplied 2% of imports).
Transportation: *Roads* (1964), 111,600 miles (179,600 km); *motor vehicles* (1965), 1,190,504 (automobiles, 771,118); *railways* (1965), 14,179 miles (22,818 km); *merchant vessels* (1966), 46 (290,000 gross registered tons); *national airlines*, 8; *principal airport*, Mexico City.
Communications: *Telephones* (1966): 823,064; *television stations* (1965), 29; *television sets* (1965), 1,800,000; *radios* (1965), 8,237,000; *newspapers* (1965), 220 (daily circulation, 4,763,000).

MICHIGAN

Major events of 1967 in Michigan were the Detroit riots, labor problems and strikes, and efforts by the legislature to enact tax reform measures (including the state's first personal income tax) and to obtain open-housing legislation. As expected, Gov. George Romney announced on November 18 that he would seek the Republican presidential nomination in 1968.

Legislation. Republicans held the narrow margin of two seats in each house of the 1967 legislature. The 1966 election had produced a tie between the parties in the House of Representatives, but special elections to fill vacancies caused by the death of two representatives (one Democrat and one Republican) resulted in Republican victories for both seats.

The legislature had as its principal task the revision of the tax structure to meet the growing demands of state agencies. In the preceding election year, the legislators had shunned this unpleasant duty, and the state had used up all except $14 million of a treasury surplus that had amounted to $167.5 million at the close of the 1966 fiscal year. The new (1963) state constitution prohibits appropriations for which funds are not available.

Faced with the prospect of leaving state agencies without budgets or funds, the legislature late in June agreed to a tax of 2.6% on personal incomes, 5.6% on corporate profits, and 7% on banks and other financial institutions, together with some minor increases in other taxes. Appropriations of $1.1 billion—all that could be financed by the new tax structure—constituted an "austerity budget" that left many agencies, particularly schools, far short of their stated necessities.

Other legislation provided for a transit authority to study conditions in and around Detroit and for refinancing of the Mackinac Bridge. Another enactment placed all of Michigan in the Eastern Standard Time zone. Previously, Dickinson county and part of Menominee county (in the Upper Peninsula) had been in the Central zone. The bill also exempted the state from Daylight Saving Time (exemption being permissible, under the Uniform Time Act passed by Congress in 1966, only through state legislative action), but petitions from citizens set this action aside pending referral to the voters in November 1968.

A second legislative session was convened on October 10 to consider two important matters—the reorganization of the lower courts as specified by the state constitution and an open-housing law. In mid-November, after fruitless debate, the legislature recessed until December 12, leaving the open-housing matter to committees.

Open-housing laws, both state and local, were among measures strongly recommended by the New Detroit Committee, formed after the Detroit riots in late July. Previously, Governor Romney had held that the civil rights provisions of the state constitution ban discrimination in all areas, including housing. The constitutional provision as applied to housing was being tested in the courts at the time the special session convened, and no decision had been announced by the end of the year.

On reconvening, the legislature on December 21 rejected the open-housing bill by a vote of 55 to 47. Meanwhile, Detroit passed an open-housing law on November 28. Other cities with such a law include Birmingham, Flint, Muskegon, and Port Huron.

Strikes and Labor Problems. Before the close of school in June, teachers' organizations were negotiating with boards of education for higher pay and better teaching conditions. In many places these disputes were resolved, but teachers in 34 districts walked out in early September, leaving 500,000 pupils unable to start to school. Detroit's two-week strike was ended with a settlement that left the board of education with a $9 million deficit for the 1967–68 school year. Demands by Detroit police officers for higher pay were forced to a compromise by the "blue flu" tactic of officers reporting themselves too ill to work.

The United Automobile Workers chose the Ford Motor Company for their initial strike target. The strike, called early in September, kept Ford from full production until November 11. Next to begin bargaining, in order, were Chrysler and General Motors. (See also AUTOMOBILES; LABOR.)

Riots. A police raid on an illegal after-hours drinking place in a Negro district of Detroit, July 23, touched off several days of rioting, arson, looting, burning, and other destruction. Detroit police had to be reinforced successively by state police, the National Guard, and federal troops brought in by air. Racial disturbances also occurred in other cities, including Grand Rapids, Pontiac, Flint, Muskegon, and Benton Harbor.

(See also DETROIT.)

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MICHIGAN • Information Highlights

Area: 58,216 square miles (150,780 sq km).

Population: 8,584,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Lansing, the capital, 120,500; Detroit, 1,600,000; Grand Rapids, 203,000; Fint, 202,000.

Government: *Chief Officers*—governor, George Romney (Republican); lt. gov., William G. Milliken (R); secy. of state, James M. Hare (Democrat); atty. gen., Frank J. Kelley (D); treas., Allison Green; supt. of pub. instr., Ira Polley; chief justice, John Dethmers. *Legislature* (convened Jan. 11, 1967)—Senate, 38 members (20 Republicans, 18 Democrats); House of Representatives, 110 members (56 R, 54 D).

Education: *School enrollment* (1965–66)—public elementary, 1,188,300 pupils (40,100 teachers); public secondary, 826,200 pupils (32,400 teachers); nonpublic, 373,800 pupils (11,490 teachers); college and university (fall 1965), 270,918 students. *Public school expenditures* (1965–66)—$990,000,000 ($545 per pupil); avg. teacher's salary, $6,850.

Public Finance (fiscal year 1967): *Revenues,* $2,033,833,330 (4% sales tax, $608,717,181; motor fuel tax, $197,468,298; federal funds, $379,026,978). *Expenditures,* $2,194,257,872 (education, $994,482,291; health, welfare, and safety, $510,205,288; highways, $392,174,815). *State debt,* $44,750,000 (June 30, 1967).

Personal Income (1966): $27,685,000,000; average annual income per person, $3,269.

Public Assistance (fiscal year 1967): $144,146,289 to 110,807 recipients (aged, $33,121,069; dependent children, $73,866,393).

Labor Force (employed persons, calendar year 1966): *Agricultural,* 71,700; *nonagricultural* (wage and salary earners), 3,138,900 (36.3% manufacturing, 17% trade, 13.5% government). *Unemployed persons* (1966)—116,900.

Manufacturing (1963): Value added by manufacture, $13,090,328,000 (transportation equipment, $5,090,843,000; primary metals, $1,155,577,000; nonelectrical machinery, $1,794,126,000; electrical machinery, $376,278,000; fabricated metals, $1,025,281,000; food and products, $729,211,000).

Agriculture (1966): *Cash farm income,* $948,599,000 (livestock, $488,165,000; crops, $398,255,000; govt. payments, $62,179,000). *Chief crops* (tons)—apples, 384,000 (ranks 3d among the states); dry edible beans, 405,700 (rank, 1st); cherries, 71,000 (rank, 1st); grapes, 50,000 (rank, 3d).

Mining (1966): *Production value,* $589,589,151. *Chief minerals* (tons)—sand and gravel, 55,123,000; stone, 37,000,000; iron ore, 14,352,310; salt, 4,464,699; clays, 2,650,000.

Fisheries (1965): *Commercial catch,* 19,747,651 pounds ($2,756,106). *Leading species*—chubs, 5,296,373 pounds ($934,825); lake herring, 3,698,932 pounds ($306,285).

Transportation (1967): *Roads,* 113,580 miles (182,750 km); *motor vehicles,* 4,371,124; *railroads,* 6,510.63 miles in operation (10,476 km); *airports with scheduled services,* 22.

Communications: *Telephones* (1966), 4,065,000; *television stations* (1967), 22; *radio stations* (1967) 194; *newspapers* (1967), 55 (daily circulation, 2,429,547).

MIDDLE EAST

LONDON DAILY EXPRESS

ARAB PRISONERS, captured on the Gaza Strip during the June war, lie face down and stripped of their outer clothing under the watchful eye of an Israeli guard.

MIDDLE EAST

The Middle East was one of the two areas of the world in 1967 in which there was actual, formal, large-scale war. In the Middle East the hostilities—unlike those in Vietnam, which continued throughout the year—occupied the brief period of six days, Monday to Saturday, June 5–10. But it would be true to say that there was no real peace in the Middle East at any time during the year. Even before June there was great tension in the region, and this persisted through the remainder of the year, with occasional outbreaks of violence still occurring after the cease-fire.

A THIRD WAR

The 1967 clash was the third Israeli-Arab war within the past two decades, the others being in 1948–49 and 1956. Apart from the first, which might be said to have had a decisive outcome in that it established the fact of Israel's existence, these wars have had a curiously inconclusive character. They are the first, second, and third acts of a drama with a great deal of tension but no sign of resolution thus far. And, so far as any observer can tell, it may go on to a tragic four or five acts.

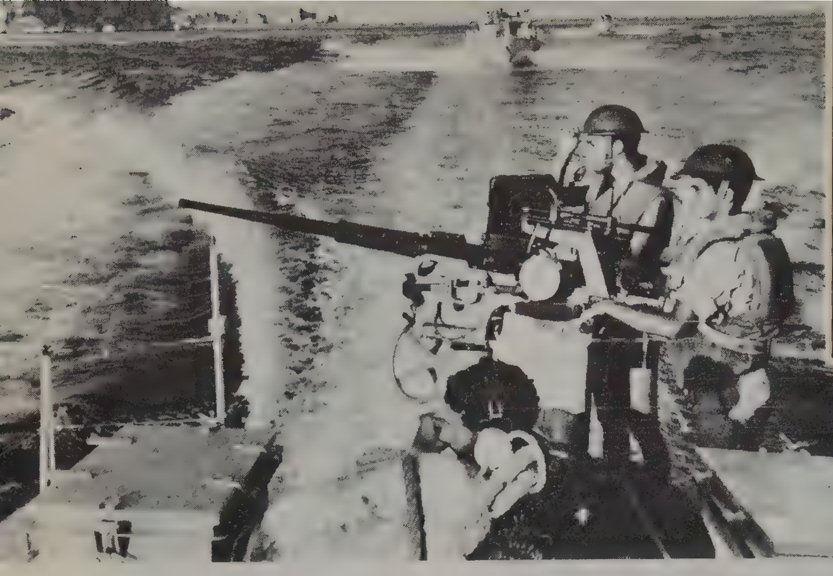
This inconclusiveness is not due to the contestants being evenly matched—on the contrary, the three wars have shown the overwhelming military superiority of Israel. This superiority is all the more remarkable when it is noted that Israel is outnumbered approximately 20 to 1 in population by the unremittingly hostile states surrounding it, and that its Arab neighbors are also overwhelmingly larger in area. The indecisiveness of the three wars has been due to the intimate involvement in the Middle East situation both of the United Nations, which has devoted to it continuous and unhelpful attention, and of the two superpowers, the United States and the Soviet Union, which have considered their interests deeply affected by events there.

The result has been that developments in the Middle East have not constituted a purely local situation. If the problem had been a purely local one, it is likely that Israel would long ago have extorted at sword's point full and formal recognition of its existence from the Arab states. Any such clear-cut result has so far been frustrated by the actions of the United Nations and the major powers. They have not dispelled the causes of war in the Middle East, nor have they prevented war's breaking out. But three times in a row they have prevented its having any decisive outcome and have thereby left all the explosive factors intact.

Background of the Conflict. The war of 1967 was, therefore, merely the latest manifestation of long-standing, irreconcilable conflict. The well-meaning exhortations addressed with careful evenhandedness to both sides, calling for a reasonable approach in the cause of peace, tended to ignore the fundamentals of the case. It is indeed difficult to frame an acceptable compromise between the basic positions of the two sides, which are simply (1) that Israel has a right to exist, and (2) that Israel has no right to exist.

The antecedents of the conflict go back far beyond 1967—to the Balfour Declaration of 1917, which pledged British support for a Jewish national home in Palestine, or at any rate to the Jewish immigration into Palestine in the 1920's and 1930's, permitted by Britain as the mandatory power.

In the most recent phase, there were numerous incidents of terrorism in 1966 along the armistice lines between Israel and Syria, and Israel and Jor-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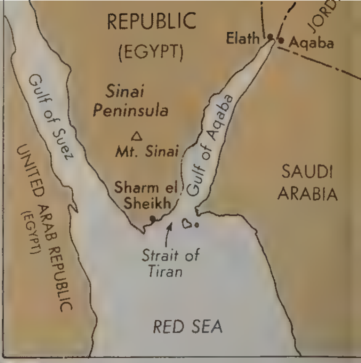


ISRAELI TORPEDO BOATS patrol the Strait of Tiran on June 10, six days after the beginning of the war caused partly by Egypt's threat to close the strait to ships bound to Israel.

dan. Increasing Israeli exasperation was shown in the tone of its representative's remarks before the UN Security Council in October 1966, when he warned that Israel could not forgo the right to defend the integrity of its territory. This was followed by the surprising major raid of Nov. 13, 1966, by Israel into Jordanian territory (although Jordan's behavior toward Israel had been much less aggressive than that of Syria). The Security Council condemned Israel for this incident in a 14–0 vote.

Tension continued to increase in the spring of 1967. There was a flare-up between Israel and Syria on April 7 near the Sea of Galilee, and there were other incidents nearby later in April.

Withdrawal of UNEF and UAR Blockade. A clear warning of the coming storm was the request from the United Arab Republic (Egypt) in May that the UN Emergency Force (UNEF) be withdrawn. UNEF had been stationed in the Gaza Strip, separating the armies of Israel and the UAR, since the war of 1956. On May 18, U Thant, the UN secretary-general, received a formal request from Egypt to withdraw the entire body, at this time a mixed force of four battalions widely deployed in the Gaza Strip and the eastern edge and southern tip of the Sinai desert. U Thant complied with alacrity, giving his orders the same day for the withdrawal of the force.

Withdrawal of UNEF permitted UAR President Gamal Abdel Nasser to move troops to the Sharm el-Sheikh position commanding the Strait of Tiran, the entry to the Gulf of Aqaba, at the north end of which is Elath, Israel's only Red Sea port. On May 22, Nasser proclaimed that the gulf would be closed to Israeli ships and all other ships carrying strategic goods to Israel. In the aftermath of Israel's astounding victory in June it was often overlooked that this blockade was the precipitating fact that led to war. It was a blow so destructive of Israel's vital interests that Israel could not ignore it.

Echoes of 1956. For a few days it looked as though there would be no effective riposte to Nasser's action, just as there had been none to his seizure of the Suez Canal in 1956. Indeed, all sorts of ghosts of 1956 walked in the chancelleries in 1967. In the immediate aftermath of the 1956 war, Israel had controlled the Sharm el-Sheikh position but had been persuaded to give it up in 1957 in return for a guarantee—the United States being the leading guarantor—of free passage through the Gulf of Aqaba. This guarantee dissolved as soon as Nasser chose to close the gulf.

The United States and Britain felt that something ought to be done. At the same time it was lamentably obvious that, beset by fears of the possible effect of their action on the Middle East oil supply, they intended to do nothing.

The Six-Day War. Meanwhile, Israel's apprehensions of imminent danger were increased by the signing on May 30 of a military agreement between Jordan and the UAR that placed their forces under "united"—that is, UAR—command. The political reaction in Israel was the formation of a broadly based coalition government on June 1; military reaction followed speedily.

The war began on the morning of Monday, June 5, with overwhelmingly successful attacks by Israeli bombers on the airfields of the surrounding Arab states. Over 300 aircraft were destroyed on the ground—despite the crisis situation, they had not even been dispersed—and Israel obtained the critical advantage of complete air superiority in the opening hours of the war. (See also AVIATION.)

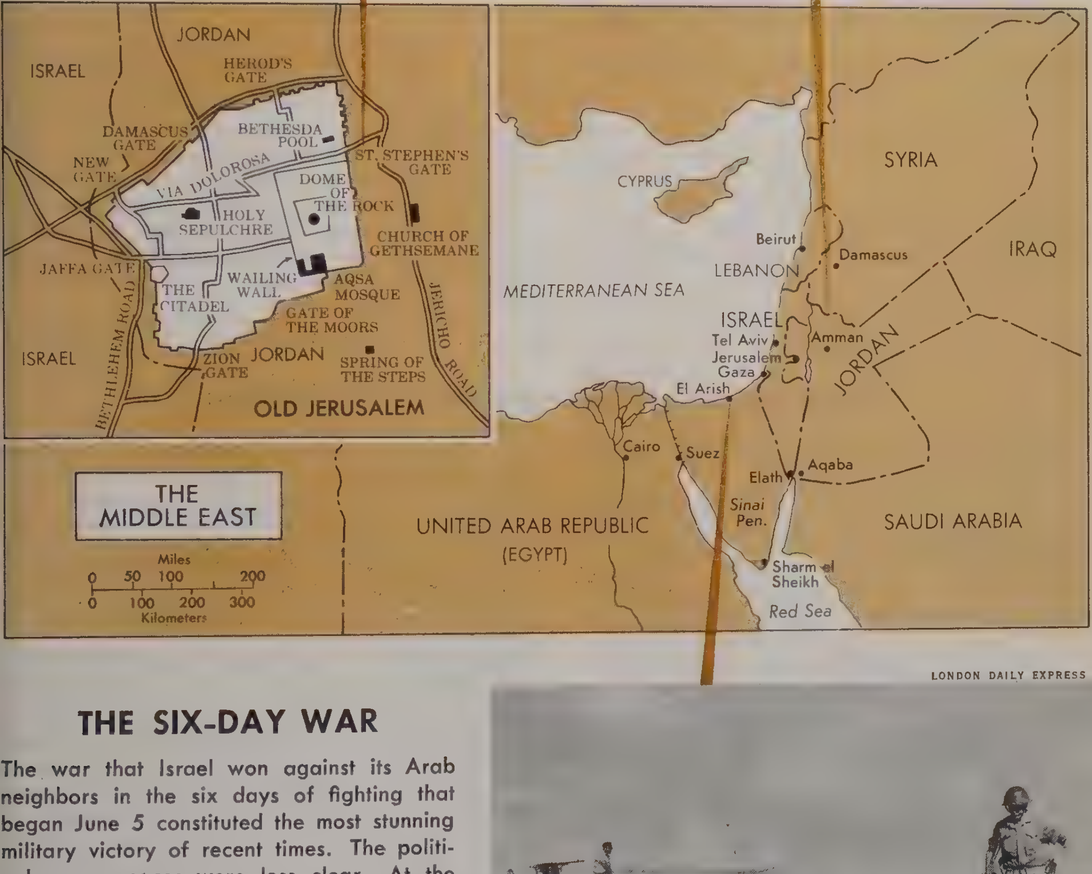
The attack had fallen mostly on Egypt, but, in accordance with the agreement of May 30, King Hussein of Jordan loyally entered the war on Egypt's side. This fidelity cost Jordan dear: its casualties were the highest of any of Israel's opponents. Syrian cooperation with Egypt, on the other hand, was negligible. The Israeli-Syrian actions that enabled Israel to occupy the Golan Heights (from which Syrian artillery for years had attacked Israeli settlers in the adjacent lower areas) were a pendant to the main war.

By the third day of the war Israeli forces had captured Sharm el-Sheikh, taken most of the Sinai Peninsula, and approached the Suez Canal. By the end of the week—and the end of the war—when the cease-fire for which the United Nations had repeatedly called became effective, Israel occupied the entire east bank of the canal, all of Jordan's former territory on the west bank of the Jordan River, and the Golan Heights. In addition to freeing navigation in the Gulf of Aqaba and establishing at least an Israeli power of veto over navigation in the canal, the victory gave Israel immense territorial gains. Israeli territory—8,000 square miles (20,72 sq km) before the war—was increased to 26,00

(Right) Israel suffered losses in men and equipment while taking the Syrian-held Golan Heights in the war's hardest fighting. *(Below)* Deep inside the Jordanian old section of Jerusalem, Israeli troops approach St. Stephen's Gate.

LONDON DAILY EXPRESS

GAMMA, FROM PIX


JORDAN
ISRAEL
HEROD'S GATE
DAMASCUS GATE
BETHESDA POOL
NEW GATE
VIA DOLOROSA
ST. STEPHEN'S GATE
DOME OF THE ROCK
HOLY SEPULCHRE
CHURCH OF GETHSEMANE
JAFFA GATE
WAILING WALL
AQSA MOSQUE
THE CITADEL
GATE OF THE MOORS
JERICHO ROAD
BETHLEHEM ROAD
ISRAEL
ZION GATE
JORDAN
SPRING OF THE STEPS
OLD JERUSALEM
CYPRUS
SYRIA
Beirut
Damascus
IRAQ
LEBANON
MEDITERRANEAN SEA
ISRAEL
Tel Aviv
Amman
Jerusalem
Gaza
JORDAN
El Arish
Cairo
Suez
Aqaba
Elath
THE MIDDLE EAST
Sinai Pen.
UNITED ARAB REPUBLIC (EGYPT)
SAUDI ARABIA
Miles
0 50 100 200
0 100 200 300
Kilometers
Sharm el Sheikh
Red Sea

THE SIX-DAY WAR

The war that Israel won against its Arab neighbors in the six days of fighting that began June 5 constituted the most stunning military victory of recent times. The political consequences were less clear. At the end of 1967, Israel still held all the territory it had conquered and seemed less inclined than ever to return land without achieving direct negotiation with representatives of the Arab states and firm assurances of peaceful coexistence among Middle East countries.

LONDON DAILY EXPRESS

Israeli soldier climbs over an Egyptian fighter destroyed on the ground, as was most of Egypt's air force, in the first hours of the fighting.

WIDE WORLD

ISRAELI SOLDIERS wave their flag from a minaret of a mosque in El Qantara, on the east bank of the Suez Canal.

square miles (67,340 sq km). The newly occupied areas had almost a million Arab inhabitants.

AFTERMATH OF THE WAR

The second half of the year, so far as the Middle East was concerned, was marked by a series of stretched-out and inconclusive events, all broadly the aftermath of the war, a war that was neither resumed nor concluded by any formal agreement.

Situation of Israel. It became a commonplace of commentary that the victorious war had left Israel, paradoxically, with a great legacy of problems. While in one sense this was true, this kind of oversubtle comment tended to lose sight of the simple fact—especially true for Israel—that it is still better to win a war than to lose it. The consequence of victory for Israel was problems; the consequence of defeat would have been national extinction.

The most serious of the problems was that posed by the new Arab population of Israel. These people were an intractable element, culturally quite distinct, that in all probability could never be assimilated into Israel. Nevertheless, the Israeli policy of ruling them with a mixture of firmness and fairness had more success in the first seven months of occupation than skeptics feared, or the militant Arabs wished. The ultimate fate of these people depends on a general Arab-Israeli agreement.

Arab Evasion of Direct Negotiation. The Israeli hope was to use victory to enforce on the Arab states direct Israeli-Arab negotiations out of which would come, among other things, an explicit recognition of Israel's existence. The Arab states were above all eager to avoid this. Aided by the involvement of the United Nations and the great powers in the issue, the Arabs were able to do so throughout the remainder of the year.

The Israeli decision, announced at the beginning of October, to begin moving settlers into the occupied territory indicated that Israel was beginning to lose hope of trading off the occupied territories,

BACKGROUND OF CONFLICT: 50 YEARS IN THE MIDDLE EAST

Nov. 2, 1917—Britain, in the Balfour Declaration, pledges support in establishing a "national home" for the Jews in Palestine.
1920—France is assigned mandates over Syria and Lebanon; Britain, over Iraq, Transjordan, and Palestine.
Oct. 29, 1923—Turkey becomes a republic under Atatürk.
1924–1925—Ibn Saud conquers and annexes the Hejaz.
1925–1927—French suppress Druze revolt in Syria.
Sept. 22, 1932—Saudi Arabia is proclaimed a kingdom.
Oct. 3, 1932—Iraq becomes independent of Britain.
1934—Ibn Saud defeats but does not annex Yemen.
1940—Italian invasion of Egypt is repelled.
1942—German invasion of Egypt is repelled.
Jan. 1, 1944—Syria and Lebanon gain legal sovereignty.
March 17, 1945—Arab League is founded.
1946—France leaves Syria (April) and Lebanon (December).
May 25, 1946—Jordan becomes a kingdom under Abdullah.
Nov. 29, 1947—United Nations votes to partition Palestine into independent Jewish and Arab states.
May 14, 1948—As British leave Palestine, Premier David Ben-Gurion proclaims Israel a sovereign nation.
Jan. 7, 1949—First Israeli-Arab War, precipitated by the establishment of Israel in May 1948, ends by armistice agreements under auspices of the United Nations.
April 24, 1950—Jordan annexes eastern Palestine.
July 26, 1952—King Faruk of Egypt is ousted.
June 18, 1953—Egypt becomes a republic under Mohammed Naguib.
Nov. 14, 1954—Gamal Abdel Nasser supplants Naguib.
July 26, 1956—Egypt nationalizes the Suez Canal.
Oct. 29–Nov. 6, 1956—Israel attacks and gains control of the Sinai Peninsula; French and British troops land at Suez Canal after air attacks on Egypt; UN Emergency Force created to supervise cease-fire.
Feb. 21, 1958—Egypt and Syria form the United Arab Republic (UAR).
March 8, 1958—Yemen federates with the UAR.
July 15–Oct. 25, 1958—President Eisenhower stations U.S. marines in Lebanon at President Chamoun's request to aid regime against internal rebels and external interference.
July 17–Nov. 2, 1958—British troops are stationed in Jordan to maintain the country's independence.
Jan. 9, 1960—UAR begins construction of Aswan High Dam.
Sept. 28–29, 1961—Syria leaves the UAR.
Dec. 26, 1961—UAR-Yemen federation is ended.
1962—Yemen's monarchy is overthrown, republic established (Sept. 26–27); civil war ensues; Jordan and Saudi Arabia support the royalists, and UAR backs republicans.
April 11, 1963—A new agreement for UAR-Syria-Iraq union is signed.
Oct. 8, 1963—Iraq and Syria announce unification of armed forces.
Nov. 18, 1963—Baathist regime in Iraq is overthrown by army; plans for Syrian-Iraqi union are upset.
Jan. 13–17, 1964—Arab League holds summit conference at Cairo; members decide to establish unified military command for possible use against Israel, and to divert sources of Jordan River to thwart Israel's plans for tapping the river.
May 13–16, 1965—Upon establishment of German-Israeli diplomatic ties, Arab states (except Tunisia, Morocco, and Libya) break off relations with West Germany.
Nov. 25, 1966—UN Security Council censures Israel after Israeli raid on Jordanian village (Nov. 13).
May 18, 1967—UAR requests withdrawal of UN Emergency Force from Gaza Strip and Sinai Peninsula; UN Secretary-General U Thant complies with request.
May 22, 1967—Nasser announces closing of Gulf of Aqaba to Israeli ships and to other ships carrying strategic goods to Israel.
May 30, 1967—Jordan and UAR sign military pact.
June 5–10, 1967—During third Israeli-Arab War, Israel inflicts heavy damage on the UAR, Jordan, and Syria and occupies the Gaza Strip, the Sinai Peninsula, the west bank of the Jordan River, and Syria's Golan Heights.
June 28, 1967—Israel officially merges the Arab and Jewish sectors of Jerusalem, ending division begun in 1948.
Nov. 22, 1967—UN Security Council adopts British-sponsored resolution to seek solution of Middle East problem.

or part of them, as the price of recognition and of free navigation of the Suez Canal—its other great objective.

In a military sense, the situation remained stable between June and December. The sinking of the Israeli destroyer *Elath* on October 21 was more than compensated for three days later by the Israeli bombardment of Suez city, destroying some 80% of Egypt's oil-refining capacity.

The Arab hopes of organizing terrorist activity in the occupied areas came to little. The most threatening development was the rapid rebuilding of Egyptian military strength by the Soviet Union, part of a general ominous increase of Soviet influence and physical presence in the Middle East and the Mediterranean.

The prolonged discussions in the United Nations (primarily in the Security Council) resulted finally in the adoption on November 22 of a British-sponsored resolution that had a little in it for everyone; but there was not much immediate prospect of its implementation. The resolution envisaged the sending of a UN envoy to the Middle East (Gunnar Jarring, a Swedish diplomat, was chosen) to seek a solution on the bases of: (1) the withdrawal of Israeli forces; (2) termination of all forms of belligerency; (3) freedom of navigation through such waterways as the Suez Canal and the Strait of Tiran; (4) settlement of the Palestine refugee problem; and (5) the territorial inviolability and political independence of every state in the area.

The UAR. The 1967 crisis once more demonstrated the resilience and durability of Nasser. Defeated thoroughly and humiliatingly in a war that he had deliberately courted, he yet remained, when the dust had settled, ruler of Egypt and the symbol of Arab nationalism. The Suez Canal was closed at the outbreak of the war and remained closed during 1967. Nasser thus lost a prime source of revenue and became (to an even greater extent than before) the pensionary of the wealthier Arab states. South Africa, the bête noire of the entire Afro-Asian world, benefited from the closing of the Suez Canal as ships were diverted to the Cape of Good Hope route. The inconvenience to the maritime powers was less than had been anticipated—and infinitely less than the briefer closure had been 11 years before. In any case, the largest tankers can no longer pass through the canal.

As the year waned, there were signs that Nasser was perhaps inclined to adopt a more reasonable attitude than before. He was less belligerent, at any rate, than Syria, Algeria, and Iraq, the new fuglemen of Arab radicalism. Smooth negotiations between the UAR and Britain in October resulted in the resumption of diplomatic relations.

Oil Blockade. The selective embargo on oil shipments that both producing and transit countries among the Arab states imposed in June against the United States, Britain, and West Germany was much less effective in harming these countries than had been expected. The chief sufferer from it and from the closure of the canal was Britain, which was in no position to stand up to economic blows. These strains contributed to British devaluation of the pound on November 18.

(See also FOREIGN POLICY OF THE U. S.; UNITED NATIONS; and articles on countries involved in the Middle East crisis.)

ARTHUR C. TURNER
University of California, Riverside

MILWAUKEE

A Negro riot in early August and more than 50 days of civil rights demonstrations beginning in late August helped make 1967 a year of turmoil for Milwaukee, Wisconsin's largest city (1967 pop. 774,000, county 1,036,041). The main issue was a proposed city open-housing law.

Riot. Rioting flared in the city's Negro inner core area on July 31, resulting in the death of three persons and damage estimated at $570,000. One hundred persons were injured and 1,500 arrested. Mayor Henry W. Maier was credited with containing the riot by imposing a 24-hour curfew and calling in the National Guard to assist the police. After the first day the curfew was limited to nighttime hours, and it was lifted entirely on August 8. The mayor immediately drafted a program to help solve Negro problems, but much of the program was not carried out.

Demonstrations. The quiet lasted until August 28, when the Milwaukee Youth Council of the National Association for the Advancement of Colored People, led by the Rev. James E. Groppi, a white Roman Catholic priest, began daily marches for an open-housing ordinance. Clashes between the police, Negro marchers, and white spectators resulted in more injuries and arrests, and a new ban on nighttime marches was imposed on August 30. This ban failed and was lifted on September 1. On September 7, about 75 militant young Negroes invaded the reception room of the mayor's office, vandalized it, and taunted and pushed the police, who were under orders not to interfere with the demonstrators' civil rights.

Countermeasures. Meanwhile, labor, church organizations, and civic leaders mounted a drive for enactment of a city open-housing law. The City Council delayed action when a citizens' group opposed to open housing petitioned the council to put the issue to a referendum. On November 28, the council voted to hold the referendum on April 2, 1968. A limited open-housing ordinance, almost identical to the state law, was approved in December.

Earlier, the City Council had rejected the mayor's request to seek federal planning funds to establish a model-cities project in Milwaukee. Further proposals by the mayor, which were rejected by the state legislature, were state aid for police departments, a county urban renewal program, and a revision of the state system of aids and shared taxes. The legislature did approve an emergency bill to provide $14 million more for Milwaukee schools, enabling the school board to increase its 1968 budget to $108 million, compared with $85 million in 1967. The City Council approved a record budget of $157 million for 1968 (up $13 million from 1967).

Economy. Officials and businessmen complained that Milwaukee business suffered as a result of the racial disturbances and charged that news coverage of the rioting was inaccurate and unduly sensational.

Employment in the Milwaukee area grew by only 2,000 in the 12-month period ending in October, compared with a gain of 20,400 for the preceding 12-month period. Building in the Milwaukee, Waukesha, and Ozaukee county area was up, with the number of permits issued in October at a 3-year high.

LAWRENCE C. LOHMANN
Milwaukee "Journal"

MINING

Mining research in 1967 was highlighted by efforts to increase the supply of minerals. World production of many minerals rose to record levels in 1966 (see table). This article deals with the research activities of the U. S. Bureau of Mines and with world production of minerals under two headings: (1) Mining Research and (2) Mineral Production.

MINING RESEARCH

The Department of the Interior's Bureau of Mines conducted a variety of research projects in 1967 to help ensure an adequate supply of essential minerals. In more than a score of laboratories and research centers across the United States, bureau scientists worked to increase knowledge of metals and other minerals, expand the technology of mineral fuels, and improve mining methods.

Mineral Research. The Bureau of Mines continued its efforts in developing undersea mining technology in 1967. Methods for evaluating undersea deposits were tested on the bureau's research vessel, *Virginia City,* in its first operating season off the Pacific coast. Gold was found in each of 49 samples taken from undersea deposits near Nome, Alaska. Although the amounts of gold were not commercially significant, they indicated that the sampling techniques were effective. The goal of the program is the eventual recovery of gold and other heavy metals now in short supply. Most methods of extracting minerals from the sea bed are too costly to be competitive with land mining.

A new mine systems engineering group was organized in 1967 at Denver, Colo., to coordinate the bureau's mining research in rock breaking, materials handling, and ground control. The objective is to weave scientific and technological work in each of these areas into a unified approach to improve methods for mineral excavation.

Bureau scientists demonstrated that significant amounts of uranium can be extracted from chemical solutions used in some copper mines to dissolve copper from its ore. Use of the extraction process could add as much as 1,000 tons of uranium oxide annually to the supply of fuel for nuclear reactors.

A new bureau laboratory was set up to seek ways to separate burned residues from city incinerators into fractions rich in ferrous metal, copper, aluminum, and zinc.

Fuels Technology. The bureau joined with the Atomic Energy Commission and the El Paso Natural Gas Company is planning for Project Gasbuggy. In this project, a nuclear device with a yield of about 26 kilotons was detonated 4,240 feet (1,292 meters) underground to spur the recovery of natural gas at a site about 55 miles (90 km) east of Farmington, N. M. The 13-foot-long (4-meter) nuclear device was exploded on Dec. 10, 1967. This blast was the first commercial use of a nuclear explosive. The successful use of nuclear explosives could double the amount of natural gas that can be recovered.

Health and Safety. Studies of stress in different kinds of rock led to prediction of landslide-prone areas in open-pit mines and promised to provide a means of predicting rock bursts in underground mines. Bureau scientists continued to work on the improvement of roof bolts and shoring devices for supporting mine passages.

For the first full year, workers in coal mines that employ less than 15 persons underground received benefit of federal safety regulations formerly limited to larger mines. Similar safety regulations for nonfuel mines were authorized by law in late 1966, and the bureau at once began to investigate all serious accidents in nonfuel mines and to determine more accurately the radiation hazards in uranium mines.

Land Reclamation. A 124–page report by the Department of the Interior on "Surface Mining and Our Environment" was submitted to President Johnson, who forwarded the report to Congress on July 3, 1967. The report, which climaxed two years of work coordinated by the Bureau of Mines, found that 3.2 million acres had been affected by surface mining. It estimated costs as high as $1.2 billion for rehabilitating affected land, and it recommended the establishment of federal regulations where states fail to control wasteful and destructive practices.

WALTER R. HIBBARD, JR.
Director, U. S. Bureau of Mines

MINERAL PRODUCTION

World mineral production achieved record levels in 1966. The output figures were higher in 1966 than in 1965 for 52 of the 65 minerals listed by the U. S. Bureau of Mines *1967 Minerals Yearbook.* New production records were set for 37 minerals.

World Production. The United States led in the production of 27 mineral commodities for which there are reasonably complete world totals. The leading producers of other minerals were: Australia in rutile; Brazil in columbium and tantalum; Canada in asbestos, nickel, byproduct elemental sulfur, and zinc (mine); Democratic Republic of Congo in cobalt and industrial diamonds; West Germany in pumice; Jamaica in bauxite; Japan in pyrites and talc; Malaysia in tin; Mexico in fluorspar and strontium; Peru in bismuth; South Africa in gem diamonds and gold; South Korea in graphite; Spain in mercury; and Sweden in arsenic.

Communist countries ranked first in 15 minerals. The USSR was the leading producer of beryl, cement, chromite, coal, high-temperature coke, corundum, iron ore, lead (mine), magnesite, manganese ore, peat, and platinum. Communist China led in the production of antimony and tungsten, and East Germany led in low-temperature coke.

The non-Communist countries provided about 70% of the steel output in 1966; more than 87% of the gold; 80% or more of the bauxite, bismuth, copper, molybdenum, crude petroleum, silver, sulfur, and zinc (mine); and 73% or more of the aluminum, fluorite, lead, magnesium, mercury, mica, salt, tin, and zinc (smelter).

United States. A record $22.9 billion worth of metals, nonmetals, and fuels was produced in the United States in 1966–6.5% above the 1965 total. The year 1966 was the eighth straight year of growth, and the value gain was the largest in a decade. Every major mineral commodity except uranium (5% decrease) and anthracite (13% decrease) showed an upward trend in volume. In value growth rates of the three major groups, metals rose 6.6% above the 1965 level, nonmetals 4%, and fuels 7.3%.

The United States contributed 25.6% of the world's steel production in 1966. Bituminous coal and lignite production was up 3.9% over 1965. Portland cement shipments in 1966 rose 5.4% over 1965.

BERENICE BARRICK MITCHELL
U. S. Bureau of Mines

WORLD PRODUCTION OF MAJOR MINERALS[1]

	1965	1966
Aluminum	(Thousands of metric tons)	
Australia	87.8	92.0
Austria	78.7	78.9
Cameroon	50.5	48.2
Canada	762.3	818.3
China	100.0(?)	100.0(?)
Czechoslovakia	62.0(?)	62.0(?)
France	340.5	363.5
Germany, East	50.0(?)	50.0(?)
Germany, West	234.4	243.9
Hungary	58.1	60.5
India	67.2	83.3
Italy	124.0	127.6
Japan	293.9	337.3
Norway	275.6	330.2
Poland[2]	47.3	55.2
Rumania	22.8	46.9
Spain	51.4	60.8
Switzerland	67.2	68.0
USSR	1,280.0(?)	1,300.0(?)
United Kingdom	36.2	37.1
United States	2,498.8	2,692.8
Yugoslavia	41.3	42.0
Total (est.)	6,730.0	7,260.0
Antimony	(Metric tons)	
Austria	394.	227.
Bolivia[3]	8,766.	10,668.
Canada	591.	613.
China	15,000.(?)	15,000.[4](?)
Czechoslovakia	2,000.(?)	2,000.(?)
Italy	266.	291.
Japan	183.	77.
Mexico	4,467.	4,459.
Morocco	2,200.	1,343.
Peru	647.	672.
South Africa	12,611.	11,371.
Thailand	1,250.(?)	1,068.
Turkey	1,669.	1,615.
USSR	6,200.(?)	6,200.(?)
United States	767.	841.
Yugoslavia[5]	2,768.	2,645.
Total (est.)	60,600.	59,800.
Asbestos	(Thousands of metric tons)	
Canada[6]	1,258.8	1,342.0
China	130.0(?)	130.0(?)
Italy	71.9	82.1
Rhodesia	159.8	160.0(?)
South Africa	218.4	250.9
USSR	785.0(?)	840.0(?)
United States	107.3	114.2
Total (est.)	2,850.0	3,040.0
Barite	(Thousands of metric tons)	
Brazil	64.4	40.2
Canada	184.2	194.0
China	100.0(?)	120.0(?)
France	104.1	100.0(?)
Germany, West[7]	450.9	461.0
Greece	120.0	130.0(?)
India	45.9	51.7
Italy	141.9	172.7
Japan	42.3	40.3
Korea, North	80.0(?)	80.0(?)
Mexico	368.3	291.5
Morocco	103.9	106.3
Peru	110.8	116.6
Poland	45.7(?)	47.0(?)
Spain	59.0(?)	59.0(?)
USSR	220.0(?)	230.0(?)
United Kingdom	61.0	31.0
United States	767.2	913.5
Yugoslavia	97.1	100.0
Total (est.)	3,500.0	3,690.0
Bauxite	(Thousands of metric tons)	
Australia	1,176.4	1,823.8
China	400.0(?)	400.0(?)
Dominican Rep.	941.8	833.0
France	2,661.8	2,805.0
Ghana	319.3	322.9
Greece	1,257.0	1,200.0(?)
Guinea	1,869.8	1,608.7
Guyana	2,918.7	2,909.0(?)
Haiti	382.6	361.4
Hungary	1,478.0	1,429.0
India	705.7	749.8
Indonesia	688.3	700.0(?)
Italy	244.4	253.7
Jamaica[8]	8,651.0	9,072.7
Malaysia	994.0	1,095.5
Sierra Leone	207.3	272.3
Surinam	4,360.0	4,585.0
USSR	4,700.0(?)	4,800.0(?)
United States	1,680.4	1,824.5
Yugoslavia	1,574.0	1,887.0
Total (est.)	37,475.0	39,340.0
Cement	(Millions of metric tons)	
Argentina	3.31	3.49
Australia	3.80	3.67
Austria	4.04	4.50
Belgium	5.91	5.80
Brazil	5.58	6.05
Canada	7.58	8.08
China	11.00(?)	11.00(?)
Czechoslovakia	5.71	6.10
France	22.37	23.28
Germany, East	6.09	6.46
Germany, West	34.13	34.74
Greece	3.21	3.59
India	10.58	11.05
Italy	20.70	22.37
Japan	32.69	38.27
Mexico	4.32	4.97
Netherlands	2.97	3.16
Poland	9.57	10.04
Rumania	5.41	5.89
South Africa	3.88	3.98
Spain	9.95	11.81
Sweden	3.72	3.69
Switzerland	4.04	4.33
Turkey	3.33	3.87
USSR	72.39	79.99
United Kingdom	16.97	17.14
United States	66.32	68.54
Yugoslavia	3.10	3.23
Total (est.)	434.67	463.66
Chromite	(Thousands of metric tons)	
Albania	315.0(?)	315.0(?)
Cuba	30.0(?)	30.0(?)
Greece	51.0(?)	40.0(?)
India	59.7	77.7
Iran	150.0(?)	175.0(?)
Japan	41.8	32.8
Pakistan	14.5	27.1
Philippines	554.6	560.1
Rhodesia	566.5(?)	500.0(?)
South Africa	942.1	1,060.9
Turkey	567.1	519.1
USSR	1,420.0(?)	1,450.0(?)
Yugoslavia	79.9	54.2
Total (est.)	4,904.0	4,942.0
Coal	(Millions of metric tons)	
Australia	52.98	55.98
Belgium	19.79	17.50
Bulgaria	25.04	25.11
China	300.00(?)	325.00(?)
Czechoslovakia	100.95	100.32
France	54.04	52.90
Germany, East	253.51	251.80
Germany, West	238.72	225.16
Hungary	31.44	30.35
India	71.80	73.10
Japan	50.11	51.80
Netherlands	11.45	10.05
Poland	141.46	146.49
South Africa[7]	48.46	47.94
USSR	577.73	600.00(?)
United Kingdom	190.51	177.38
United States	478.04	496.07
Yugoslavia	29.96	29.31
Total (est.)	2,802.62	2,846.25
Copper (mine)	(Thousands of metric tons)	
Australia	92.3	106.6
Bulgaria	29.9	31.0(?)
Canada[9]	460.7	462.5
Chile	585.3	657.1
China	90.0(?)	90.0(?)
Congo, Dem. Rep. of[5]	288.6	315.7
Cyprus[3]	19.3	25.2
Finland	29.8	26.4
Germany, East	20.0(?)	20.0(?)
Japan	107.1	111.3
Mexico	69.2	74.4
Norway	15.0	14.5
Peru	180.3[9]	176.4
Philippines	62.7	73.6
Rhodesia	18.0	17.2(?)
South Africa	60.5	124.7
S. West Africa	39.4	38.9
Turkey	33.6	36.4(?)
USSR[5]	750.0(?)	800.0(?)
United States[9]	1,226.3	1,296.5
Yugoslavia	62.6	62.2
Zambia	695.7	623.4
Total (est.)	5,070.0	5,315.0
Diamonds	(Thousands of carats)	
Angola	1,155.	1,268.
Brazil	350.(?)	300.(?)
Cen. African Rep.	536.	540.
Congo, Dem. Rep. of	17,804.	17,732.
Ghana	2,248.	2,819.
Liberia[3]	540.	555.
Sierra Leone	1,462.	1,462
South Africa	4,945.	6,135.
S. West Africa	1,646.	1,759.
Tanzania	828.	946.
USSR	3,500.(?)	3,500.(?)
Total (est.)	35,493.	37,451.
Gold	(Millions of ounces)	
Australia	0.92	0.91
Canada	3.59	3.27
Colombia	0.32	0.28
Congo, Dem. Rep. of	0.09	0.16
Ghana	0.76	0.68
Japan	0.26	0.25(?)
Mexico	0.22	0.19
Nicaragua	0.20	0.20
Philippines	0.44	0.45
Rhodesia	0.54	0.55(?)
South Africa	30.55	30.88
USSR	5.03(?)	5.37(?)
United States	1.71	1.80
Total (est.)	46.70	47.10
Graphite	(Thousands of metric tons)	
Austria	85.8	79.5
Brazil	1.2	1.2(?)
Ceylon[8]	8.9	10.0
China	40.0(?)	40.0(?)
Germany, West	13.6	13.4
Japan	2.3	2.2
Korea, South	257.0	130.9
Malagasy	17.0	17.0(?)
Mexico	40.4	43.1(?)
Norway	7.7	7.7(?)
USSR	55.0(?)	56.0(?)
United States	(10)	(10)
Total (est.)	620.0	495.0
Gypsum	(Thousands of metric tons)	
Australia	846.9	804.0
Austria	617.9	777.0
Canada	5,720.3	5,426.7
France	5,012.7	5,000.0(?)
Germany, West[7]	1,300.0	1,304.9
India	1,148.2	1,293.0
Iran	1,500.0(?)	1,800.0(?)
Italy	3,278.8	3,300.0(?)
Japan	650.0	597.9
Mexico	1,081.7	1,151.1
Poland	762.0(?)	762.0(?)
South Africa	303.9	296.5
Spain	2,855.0(?)	2,850.0(?)
UAR (Egypt)	228.9	458.6
USSR	4,344.0	4,400.0(?)
United Kingdom	4,465.0	4,358.0
United States	9,102.0	8,751.0
Total (est.)	47,850.0	47,970.0
Iron (pig) incl. ferroalloys	(Millions of metric tons)	
Australia	4.35	4.74
Austria	2.20	2.20
Belgium	8.37	8.23
Brazil	2.40	2.94
Canada	6.57	6.71
China	19.00(?)	20.00(?)
Czechoslovakia	6.12	6.26
France	15.76	15.59
Germany, East	2.34	2.45
Germany, West	26.99	25.41
Hungary	1.59	1.64
India	7.11	7.24
Italy	5.63	6.42
Japan	28.16	32.74
Luxembourg	4.15	3.96
Netherlands	2.36	2.21
Poland	5.76	5.86
Rumania	2.02	2.20
South Africa	3.60	3.74
Spain	2.43	2.22
Sweden	2.46	2.40
USSR	66.18	70.30
United Kingdom	17.74	15.96
United States	82.57	85.28
Yugoslavia	1.18	1.22
Total (est.)	335.24	346.75

WORLD PRODUCTION OF MAJOR MINERALS, Cont'd.

	1965	1966
Lead (smelter)	(Thousands of metric tons)	
Argentina....	32.0	22.0
Australia[11]....	264.4	272.1
Belgium[2].....	110.8	92.7
Bulgaria.....	93.4	90.9(?)
Burma.......	18.0(?)	18.0(?)
Canada.....	169.2	167.7
China.......	100.0(?)	100.0(?)
France......	98.4	108.6
Germany, East[2]......	25.0(?)	25.0(?)
Germany, West......	104.0	109.6
Italy........	39.4	53.6
Japan.......	108.3	118.6
Korea, North.	50.0(?)	50.0(?)
Mexico......	164.3	172.1
Morocco.....	17.2	18.8
Peru........	86.8	88.8
Poland......	41.4	43.5
S.W. Africa..	66.0	75.3
Spain.......	52.4	55.1
Sweden.....	40.4	43.7
Tunisia......	14.2	14.0
USSR[2].......	370.0(?)	370.0(?)
United States.	379.4	399.8
Yugoslavia...	101.5	97.5
Zambia......	21.3	18.8
Total (est.).	2,635.0	2,720.0
Magnesium	(Thousands of metric tons)	
Canada.....	9.17	6.16
China.......	1.00(?)	1.00(?)
France......	2.84	3.42
Germany, West......	0.50(?)	0.50(?)
Italy........	6.31	6.20(?)
Japan.......	3.79	3.80(?)
Norway.....	26.43	27.50(?)
USSR........	33.00(?)	33.00(?)
United Kingdom[2]..	5.38	5.40(?)
United States.	73.81	72.39
Total (est.).	162.20	159.40
Manganese Ore	(Thousands of metric tons)	
Australia.....	103.6	282.5
Brazil.......	1,396.1	1,239.3
Bulgaria.....	42.0(?)	42.0(?)
Chile........	16.6	17.9
China.......	1,000.0(?)	1,000.0(?)
Congo, Dem. Rep. of....	377.6	249.3
Cuba.......	75.0(?)	75.0(?)
Gabon......	1,280.4	1,273.5
Ghana.[8].....	604.0	587.3
Guyana.....	168.9	182.9
Hungary.....	213.0	215.0(?)
India (incl. Goa).	1,614.7	1,678.0
Ivory Coast...	179.8	176.2
Japan.......	303.0	310.1
Mexico......	130.0(?)	82.0(?)
Morocco.....	375.9	362.4
New Hebrides	66.7	76.2
Rumania.....	126.0	136.0(?)
South Africa..	1,567.4	1,692.9
USSR........	7,576.0	8,000.0(?)
United States.	26.5	13.1
Total (est.).	17,632.0	18,175.0
Mercury	(Thousands of flasks)	
Chile........	0.43	0.11(?)
China.......	26.00(?)	26.00(?)
Czechoslovakia...	0.73(?)	0.73(?)
Italy........	57.32	53.55
Japan.......	4.54	4.50(?)
Mexico......	19.19	17.00(?)
Peru........	3.12	3.00(?)
Philippines...	2.38	2.40(?)
Spain.......	82.76	78.00
Turkey......	2.76	2.80(?)
USSR........	40.00(?)	40.00(?)
United States.	19.58	22.01
Yugoslavia...	16.42	15.90
Total (est.).	276.00	266.00
Nickel (mine)	(Thousands of metric tons)	
Canada.....	242.5	220.3
Cuba.......	27.4(?)	27.4(?)
Finland......	3.1	3.2
Korea, South..	2.8	4.0(?)
New Caledonia[9].....	52.1(?)	60.7(?)
Poland......	1.1	1.3(?)
South Africa..	3.0(?)	5.4(?)
USSR........	85.0(?)	90.0(?)
United States.	12.3	12.0
Total (est.).	435.0	430.0
Petroleum	(Millions of barrels)	
Algeria......	206.3	256.5
Petroleum (cont'd)		
Argentina....	98.3	102.9
Canada.....	292.3	321.4
Colombia....	73.2	71.4
Germany, West......	56.9	56.8
Indonesia[12]...	178.2	169.1
Iran.........	688.2	771.2
Iraq.........	482.5	505.4
Kuwait......	791.9	830.5
Kuwait-Neutral Zone......	132.3	152.7
Libya.......	445.4	550.2
Mexico......	118.0	121.1
Nigeria......	99.4	152.4
Qatar.......	84.2	105.9
Rumania.....	93.7	95.6
Saudi Arabia.	739.1	873.3
Trinidad.....	48.9	55.6
Trucial States.	102.8	131.5
USSR........	1,786.0	1,948.0
United States.	2,848.5	3,027.8
Venezuela...	1,267.6	1,230.5
Total (est.).	11,058.4	12,007.1
Phosphates	(Thousands of metric tons)	
Brazil.......	278.7	280.0(?)
China.......	900.0(?)	1,000.0(?)
Christmas Is.[3].	751.4	965.8
Israel.......	388.0	400.0(?)
Jordan......	827.9	1,035.9
Makatea Is...	308.2	200.1[3]
Morocco.....	9,824.4	9,439.3
Nauru Island[8].	1,479.9	2,036.8
Ocean Island[8]	365.1	380.0
Senegal.....	1,002.2	1,134.8
South Africa..	609.8	1,063.3
Togo........	966.1	1,114.5
Tunisia......	3,039.8	3,200.0
UAR (Egypt)..	593.7	660.8
USSR[13].......	27,800.0(?)	29,200.0(?)
United States.	26,704.0	35,425.0
Total (est.).	77,720.0	89,310.0
Potash[14]	(Thousands of metric tons)	
Canada.....	1,352.9	1,855.2
France......	1,879.0	1,910.0(?)
Germany, East.......	1,926.0	2,000.0(?)
Germany, West......	2,384.7	2,300.0(?)
Israel.......	310.0(?)	372.0(?)
Spain.......	362.5	442.8(?)
USSR........	2,350.0(?)	2,550.0(?)
United States.	2,848.5	3,011.8
Total (est.).	13,700.0	14,700.0
Pyrite	(Thousands of metric tons)	
Australia.....	207.3	247.9
Canada[6].....	320.1	294.1
China.......	1,500.0(?)	1,500.0(?)
Cyprus......	993.5	987.3
Finland......	581.9	516.5
Germany, West......	438.7	449.8
Italy........	1,401.5	1,304.4
Japan.......	4,323.4	4,747.0
Norway.....	708.9	673.5
Portugal.....	613.4	557.9
South Africa..	428.3	481.2
Spain.......	2,384.8	2,387.9
Sweden.....	441.4	440.0(?)
Turkey.......	132.2	173.6
United States.	889.0	886.4
USSR........	3,300.0(?)	3,300.0(?)
Yugoslavia...	406.8	378.0
Total (est.).	21,450.0	21,500.0
Salt	(Millions of metric tons)	
Brazil.......	1.20	1.31
Canada.....	4.16	3.93
China.......	13.00(?)	13.00(?)
France......	4.45	4.20(?)
Germany, East.......	1.89	2.00(?)
Germany, West[7].....	5.54	6.46
India........	4.70	4.51
Italy........	3.24	3.54
Japan.......	0.85	0.85
Mexico......	2.20	2.43
Netherlands..	1.71	1.86
Poland......	2.30	2.41
Rumania.....	2.02	2.05
Spain.......	1.97	1.96(?)
UAR (Egypt)..	0.49	0.63
USSR........	9.50(?)	9.50(?)
United Kingdom...	7.00	7.35
United States.	31.47	33.09
Total (est.).	108.02	111.19
Silver	(Millions of ounces)	
Argentina....	2.29	2.00(?)
Australia.....	17.31	18.28
Bolivia[3]......	4.11	5.12
Burma.......	1.64	1.10
Canada.....	31.92	33.34
Chile........	3.27	3.61
Congo, Dem. Rep. of....	1.54	1.85
Germany, West......	2.02	1.98
Honduras....	3.67	3.73
Italy........	1.10	1.13
Japan.......	8.99	3.58
Mexico......	40.33	41.98
Peru[9]........	36.47	32.84
Philippines...	0.93	1.16
South Africa..	3.13	3.13
S. West Africa[9]....	1.54	1.52
Spain.......	2.32(?)	2.32(?)
Sweden.....	4.96	4.50
USSR........	27.00(?)	27.00(?)
United States.	39.81	43.67
Yugoslavia...	4.15	3.65
Total (est.).	254.10	253.00
Sulfur (elemental)	(Millions of metric tons)	
Canada[6].....	1.88	1.80
France......	1.52	1.52
Mexico......	1.59	1.71
Poland......	0.43	0.48
USSR........	1.43(?)	1.43(?)
United States.	7.45	8.37
Total (est.).	15.50	16.59
Tin (mine)	(Thousands of long tons)	
Bolivia......	23.3	26.3
China[5].......	25.0(?)	22.0(?)
Congo, Dem. Rep. of....	6.3	5.1(?)
Indonesia....	14.7	12.5(?)
Malaysia....	63.7	68.9
Nigeria......	9.5	9.4
Thailand.....	19.0	22.6
USSR[5].......	21.0(?)	22.0(?)
Total (est.).	199.8	208.0
Titanium (ilmenite)	(Thousands of metric tons)	
Australia.....	452.4	524.6
Canada.....	495.2	476.1
Ceylon......	49.2	41.2[3]
Finland......	107.0	117.6
India........	30.1	30.2
Malaysia[3]....	123.5	118.3
Norway.....	282.2	369.7
Spain.......	32.2	42.2
United States.	879.5	875.8
Total (est.).	2,470.3	2,620.6
Tungsten[15]	(Thousands of metric tons)	
Australia.....	1.99	2.21
Bolivia[3]......	1.85	2.63
Burma.......	0.34	0.24
Canada......	2.83	3.00
China.......	17.00(?)	17.00(?)
Japan.......	0.72	0.69
Korea, South.	4.48	4.32
Peru........	0.80	0.73
Portugal.....	1.64	2.02
USSR........	11.50(?)	11.50(?)
United States.	7.21	8.09
Total (est.).	57.20	59.20
Uranium Oxide (U_3O_8)	(Metric tons)	
Australia.....	335.(?)	300.(?)
Canada.....	4,031.	3,467.
France......	1,712.	1,700.(?)
Gabon......	657.	550.(?)
South Africa..	2,669.	2,981.
United States.	9,473.	8,603.
Total (est.)[16]	19,100.	17,850.
Zinc (smelter)	(Thousands of metric tons)	
Australia.....	202.2	197.5
Belgium[2].....	239.8	251.7
Bulgaria.....	65.8	60.0(?)
Canada.....	325.3	347.1
China.......	90.0(?)	90.0(?)
France......	192.0	196.1
Germany, West......	107.7	123.0
Italy........	80.9	77.2
Japan.......	367.8	399.5
Mexico......	62.7	71.6
Peru........	62.4	62.6
Poland......	190.4	193.0
Spain.......	54.5	55.6
USSR........	465.0(?)	470.0(?)
United Kingdom...	106.8	101.3
United States.	902.1	929.9
Total (est.).	3,885.0	4,000.0

[1] Output of minor countries not listed are included in totals. In general, listing includes countries that have produced more than 10% of the total. [2] Includes secondary. [3] Exports. [4] 1965 data. [5] Smelter output. [6] Sales. [7] Marketable. [8] Dry weight. [9] Recoverable. [10] Withheld to avoid disclosing individua company confidential data. [11] Includes lead content of lead bullion (for export). [12] Includes West Irian. [13] Includes sedimentary rock. [14] Marketable ir equivalent K_2O. [15] Concentrates 60% Wo_3 basis. [16] Excludes estimate for USSR. A question (?) means an estimate. Source: U.S. Bureau of Mines.

MINNESOTA

The nationwide unrest among Negroes, youth, and unionized workers in 1967 was reflected in Minnesota, where there were numerous demonstrations and strikes. Minnesotans in the news included Republican Harold LeVander, who became governor of the state on January 2, and U. S. Sen. Eugene J. McCarthy, who announced on November 30 that he would oppose President Johnson in several Democratic primaries in 1968 (see McCARTHY).

Civil Disturbance. Racial rioting wracked North Minneapolis for two nights in July, causing property damage of more than $500,000. Governor LeVander ordered the National Guard into the area on July 21. Three days later, Mayor Arthur Naftalin met with Negro protesters and heard their complaints: lack of job and educational opportunities, inadequate recreational facilities, poor housing. The charge of police brutality was denied by city officials.

An uneasy calm settled over the area after the mayor promised to investigate the grievances and to report progress once a month. On August 25 the Minneapolis City Council adopted the strongest civil rights law in the city's history, banning discrimination in housing, job referral, labor union membership, and public accommodations and services.

The State University. Malcolm Moos succeeded O. Meredith Wilson as president of the University of Minnesota on September 1. During his first months in office, President Moos was faced with a succession of student demonstrations, although the violence that characterized similar demands for student power elsewhere was avoided.

MINNESOTA • Information Highlights

Area: 84,068 sq miles (217,736 sq km).
Population: 3,582,000 (July 1, 1967 est.).
Chief Cities (1965 est.): St. Paul, the capital, 308,000; Minneapolis, 465,000; Duluth, 104,000; Bloomington, 65,000; St. Louis Park, 50,000; Richfield, 49,000; Rochester, 47,000.
Government: *Chief Officers*—governor, Harold LeVander (Republican); lt. gov., James B. Goetz (R); secy. of state, Joseph L. Donovan (Democratic-Farmer-Labor); atty. gen., Douglas M. Head (R); treas., Val Bjornson; com. of educ., Duane J. Mattheis; chief justice, Oscar R. Knutson. *Legislature*— convened Jan. 3, 1967 ; elected without party designation): Senate, 67 members; House of Representatives, 135 members.
Education: *School enrollment* (1965–66)—public elementary, 464,000 pupils (17,700 teachers); public secondary, 361,000 pupils (17,000 teachers); nonpublic, 186,000 pupils (6,390 teachers); college and university (fall 1965), 118,533 students. *Public school expenditures* (1965–66)—$438,000,000 ($573 per pupil); avg. teacher's salary, $6,660.
Public Finance (fiscal year 1967): *Revenues*, $1,441,439,191 (selective sales tax, $285,434,891; motor fuel tax, $102,685,582; federal funds, $253,647,741); *Expenditures*, $1,412,649,801 (education, $430,045,145; health, welfare, and safety, $340,661,684; highways, $421,607,857). *State debt*, $256,102,000 (Sept. 11, 1967).
Personal Income (1966): $10,373,000,000; average annual income per person, $2,904.
Public Assistance (fiscal year 1967): $136,328,200 to 131,452 recipients (aged, $19,671,600; dependent children, $31,067,000).
Labor Force (employed persons, Aug. 12, 1967): *Agricultural*, 243,000; *nonagricultural* (wage and salary earners), 1,381,900 (21.7% manufacturing, 20.5% trade, 15.2% government). *Unemployed persons* (Aug. 12, 1967)—44.000.
Manufacturing (1963): Value added by manufacture, $2,806,116,000 (transportation equipment, $130,358,000; primary metals, $64,633,000; nonelectrical machinery, $482,493,000; electrical machinery, $225,256.000; fabricated metals, $142,036,000; food and products, $587,507,000).
Agriculture (1966): *Cash farm income*, $1,950,055,000 (livestock, $1,271,124,000; crops, $543,502,000; govt. payments, $135,429,000). *Chief crops* (tons)—hay, 8,094,000 (ranks 2d among the states); oats, 2,212,656 (rank, 1st); flaxseed, 107,464 (rank, 3d); corn for grain, 9,563,232.
Mining (1966 est.): *Production value*, $549,767,000. *Chief minerals* (tons)—iron ore, 61,376,000; sand and gravel, 38,000,000; stone, 4,300,000; manganiferous ore, 291,000.
Transportation: (1966): *Roads*, 126,385 miles (203,353 km); *motor vehicles*, 2,212,500; *railroads*, 12,104.6 track miles (19,476 km); *airports with scheduled services* (1967), 12.
Communications: *Telephones* (1966), 1,730,300; *television stations* (1967), 17; *radio stations* (1967), 107; newspapers (1966), 30 (daily circulation, 1,104,000).

WIDE WORLD

MINNEAPOLIS POLICE were armed with shotguns when they broke up a second night of racial rioting in July.

Labor Problems and the Economy. A rash of strikes marked the economic scene. Major industrial shutdowns occurred in the Minneapolis-St. Paul area—at the Twin Cities Army Ammunition plant and plants of the 3M Company (Minnesota Mining and Manufacturing Company). One small firm of national repute, the 90-year-old Red Wing Potteries, of Red Wing, was liquidated when a wage dispute could not be settled. Bus riders in the state's largest metropolitan area were left without public transportation by a strike against the Twin Cities Rapid Transit Company that began on November 4 and ended December 21. Despite these and other strikes, Minnesota's unemployment rate (2.2% in September) was well below the national level (4.1%).

Legislation. The 1967 session of the legislature produced three highly controversial laws. Two concerned regulation of Sunday sales. Over the strong protests of religious groups, local option for Sunday sale of liquor in restaurants was approved. Legislation forbidding the sale of certain merchandise on Sundays or holidays was challenged in the courts and was ruled unconstitutional by municipal judges in Duluth, Brooklyn Center, Maplewood, and Bloomington. Other communities continued to enforce the Sunday closing law, but it appeared certain that the state Supreme Court would be asked to rule on the law's constitutionality.

Passage of a law authorizing a state sales tax led to a break between Governor LeVander and the legislature. In the election campaign of 1966, LeVander had opposed a general sales tax unless provision was made for ratification by public vote. When the legislators adopted a 3% sales tax without providing for a referendum, the governor vetoed the bill. The veto was overridden in a special session on June 1, and a tax on all items purchased at retail except food, prescription medicines, clothing, and gasoline went into effect on August 1.

JEANNE SINNEN
University of Minnesota Press

MISSILES

U. S. ARMY PHOTO, COURTESY OF THE MARTIN CO.

SPRINT ANTIMISSILE MISSILE roars aloft in a test flight at White Sands Missile Range. Armed with a nuclear warhead, it will be part of the Nike-X Sentinel system.

MISSILES

Ominous developments in the international arms race in 1967 cast shadows on what hopes may have been raised by formal treaties to halt the testing and spread of nuclear weapons and to promote the peaceful uses of atomic energy. As Communist China exploded its first fully thermonuclear device, both the USSR and the United States explored still more terrible areas of weaponry, such as orbital missiles and vehicles that could deliver bombs to one city after another. Both nations also were pursuing costly missile defense programs. This was a decision long debated by the U. S. government, whose policy has been to depend on an arsenal capable of raining down so many bombs—through the use of multiple warheads in its strategic missiles—that any aggressor's defenses would be exhausted quickly. Thus, in theory, no enemy would dare a nuclear attack at the risk of such retaliation.

U. S. MISSILE DEVELOPMENTS

Despite assurances that a nation's military might must not be judged simply by its total nuclear megatonnage but also by the manner of distribution of that power, fear grew in many circles that the USSR was pulling ahead of the United States in nuclear strength. A study sponsored by the House Armed Services Committee and conducted largely by retired officers issued the following statistics:

In 1962 the United States had between 25,000 and 50,000 megatons, compared with 6,000 to 12,000 for the Soviet Union. In 1967 the U. S. megatonnage had decreased to between 8,000 and 29,000, while the USSR's had increased to between 16,000 and 37,000. It was estimated that by 1971 the U. S. figure would reach a low of between 6,000 and 15,000 megatons, while the USSR's would climb to between 30,000 and 37,000. The U. S. decrease started in 1962 when the Defense Department began phasing out its B-47 bombers and its intermediate-range ballistic missiles (IRBM's) stationed in Europe.

Strategic Missiles. The strategic missile arsenal of the United States is set at 650 siloed Minuteman 1 and 350 Minuteman 2 intercontinental ballistic missiles (ICBM's), and 656 Polaris ICBM's contained in 41 nuclear submarines. The rest of the nuclear delivery system is made up of 600 aging B-52 strategic bombers, a few B-58 bombers, and 54 Titan ICBM's. The deployment of the advanced Minuteman 3 missile (now in the research and development stage) has been postponed, possibly until 1971.

The USS *Will Rogers*, the last nuclear-powered Polaris submarine, was commissioned in March. The Polaris fleet at that time was made up of 28 submarines carrying the Polaris A-3 missile; the rest carried the A-2. However, the Navy announced plans to arm its 10 oldest Polaris submarines with the longer-range A-3 missile and to put new Poseidon missiles on the remainder. Each of the Poseidons carries three hydrogen bombs that can be programmed for different targets. Thus the Navy will have almost 2,000 warheads standing ready in the world's seas.

Tactical Missiles. The United States moved to cut down the number of tactical missiles on its lists. This could be done simply by removing some of those missiles that would not perform or that had grown obsolete.

The Navy signed a contract with the General Dynamics Corporation in March for production of a new antiaircraft missile, the Standard. For many years the Navy had tried to solve the problems of the "3-T" weapons—Terrier, Tartar, and Talos—already on Navy vessels. After $3 billion worth of development costs and nostrums, however, the service had to admit that it had given up its shipboard guns for missiles too early in the missile era. The Standard will use some of the Terrier and Tartar parts and will be powered by solid-propellant rockets. It will be in two versions: one with a range of more than 10 nautical miles (over 18 km), to replace the Tartar; the other with an extended range of more than 30 nautical miles (over 55 km), to replace the Terrier. The longer Talos range will not be covered by shipboard missiles.

The Army announced in April its plan to build an improved nuclear missile that NATO battlefield forces could use in the 1970's. Called the Extended-

Range Lance (XRL), it probably would replace the Sergeant missile. If this plan works, NATO's nuclear force will consist of the regular Lance, with a 30-mile (48-km) range; the XRL, with twice that range; and the Pershing, with a 500-mile (800-km) range. The Army's nuclear arsenal would be simplified by the removal of Honest John and perhaps Little John. Davy Crockett, a nuclear mortar that the Army conceded was too vulnerable to enemy fire, was removed from inventory early in 1967.

MIRV or "Space Bus" Missile. The concept of a multiple independently targeted reentry vehicle, or MIRV, has been studied by both the United States and the USSR for some time. Such a vehicle, by making minute adjustments in speed and direction while in flight, and ejecting one of its several warheads after each adjustment, could deliver each warhead to a different enemy city or other target area. In December the United States announced that a weapon of this kind—also called a "space bus"—was under actual development, and would be placed on Minuteman 3 and Poseidon missiles. This was considered a reaction to the USSR's continuing deployment of an antiballistic missile (ABM) system, and to its deployment of an orbital missile.

Advances in Technology. In April the United Technology Center at Sunnyvale, Calif., successfully test-fired the largest known hybrid rocket. The 40,600-pound-thrust (18,370-kg) motor got its power by passing a liquid oxidizer over a solid fuel, instead of by burning a liquid or a solid fuel alone. The test indicated that hybrid rockets can be scaled up to generate 1 million pounds (450,000 kg) of thrust, or more. The company claimed that the hybrid rocket is the easiest rocket to use for such large thrusts, because it is safer to handle and is not sensitive to fabrication errors. (See also SPACE EXPLORATION—*Advances in Space Technology.*)

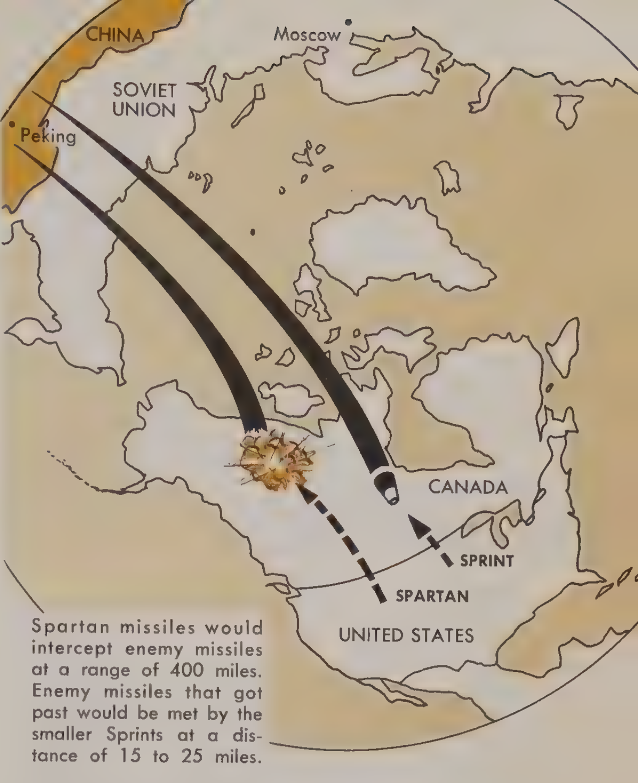
Data recorders were carried in the noses of several ICBM's test-fired by the Air Force late in 1966 and in 1967. The success of the venture was not revealed until 1967, when the Air Force told of recovering a 25-pound (11.2-kg) recorder and its data after the device had lain submerged in the Pacific Ocean for 48 hours. Packaged to withstand 2,200 g's of acceleration, the recorder helps to give experimenters a complete launch-to-impact picture of the reentry operation.

DEVELOPMENTS IN OTHER COUNTRIES

Developments in the Soviet Union and Communist China presented new threats to the missile defense and retaliation systems of the United States.

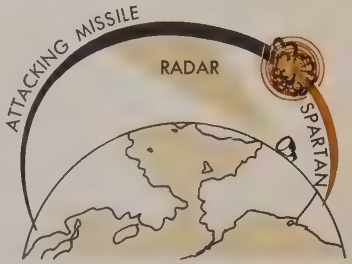
Communist China. The Communist Chinese detonated their first nuclear device on Oct. 16, 1964. They rapidly increased the yield of succeeding devices. On June 17, 1967, at the Lop Nor test site in Sinkiang province, they detonated their first fully thermonuclear weapon. Western authorities believe that an aircraft was used to drop the device, which was in the megaton range. For U. S. officials the worrisome fact was that the Communist Chinese now have the ability to design a multimegaton thermonuclear bomb suitable for delivery by aircraft.

In July the U. S. Joint Committee on Atomic Energy issued a white paper on Chinese missile developments. It stated that if the Chinese continued their testing, they would be able to develop a thermonuclear warhead in the ICBM weight class with a yield in the megaton range by about 1970, and by 1972—conceivably even earlier—they would have the ICBM operational. The committee also stated that the Chinese already had developed an IRBM but that there was no indication of its deployment. The Chinese were said to be capable of producing a thermonuclear warhead with a yield of a few hundred kilotons for the IRBM's by about 1970 and a megaton-range IRBM warhead by about 1972.



Spartan missiles would intercept enemy missiles at a range of 400 miles. Enemy missiles that got past would be met by the smaller Sprints at a distance of 15 to 25 miles.

SENTINEL ANTI-BALLISTIC MISSILE SYSTEM



Spartan will loft a "Spectrum bomb" that emits shower of X-rays when it explodes, destroying enemy warheads by heating effect.

SENTINEL "thin-line" defense, approved by the United States in 1967, is designed to respond to a limited attack.

Soviet Union. As most observers expected, the USSR was eager to celebrate the 50th anniversary of the Russian Revolution with a show of its missile might in Moscow's Red Square on November 7. Five new kinds of missiles were paraded, and also a missile-bearing armored reconnaissance vehicle. The most spectacular of these weapons was a solid-fuel ICBM about 110 to 120 feet (33.5–36.6 meters) long. Although no distinct number of rocket stages was visible, the ICBM is about the same length as the 3-stage Soviet Scrag ICBM displayed in May 1965 as a sister to the boosters that launched the Vostok and Voskhod manned spacecraft.

Soviet officials claim that the 8-wheeled mobile launcher on which the new ICBM rode can outrace many passenger cars and can play hide-and-seek with observational satellites and aircraft. Once the missile is in place, a single soldier can operate the automatic mechanisms that would aim the ICBM at targets thousands of miles away. If these claims are true, the Russians have devised a mobile strategic missile system that is almost as invulnerable as the U. S. system of Polaris submarines.

Two other all-out-war missiles were displayed. One was an IRBM, solid-fueled and clearly propelled by two rocket stages. This missile also was mounted on a launcher that the Russian news agency Tass said was so mobile that it would be "nearly impossible to detect and destroy." The second weapon was a submarine-launched missile that looks roughly like the U. S. Navy's Polaris A-3 but is a little longer. Its lines were too smooth to reveal whether it had one or two stages.

One of the most striking systems displayed was a covey of three antiaircraft missiles carried on top of a tracked battlefield vehicle. Slimmed down for low air drag and made lengthy for high impulse, the weapons all had "special" warheads that could stop a cluster of aircraft far from the launch site—according to Tass—at low altitudes, if necessary. The Russians also showed a novel arrangement of an antitank missile mounted above the traditional cannon of an armored reconnaissance vehicle.

DIRECTORY OF MAJOR U. S. MISSILES

Missile	Status[1]	Service	Approx. range[2]	Propulsion
Surface-to-Surface				
Advanced ICBM	S	USAF	. . .	. . .
Davy Crockett	R	Army	short	Solid rocket
Honest John	O	Army	12	Solid rocket
Lance	D	Army	30	Storable liquid
Lance (XRL)	D	Army	60	Storable liquid
LASV	D	Air Force	. . .	Liquid /ramjet
Little John	O	Army	10	Solid rocket
Mace A	O	Air Force	650+	Solid /turbojet
Mace B	O	Air Force	1,200+	Solid /turbojet
Minuteman I	O	Air Force	6,300	Solid rocket
Minuteman II	O	Air Force	7,000	Solid rocket
Minuteman III	D	Air Force	. . .	Solid rocket
Pershing	O	Army	500	Solid rocket
Polaris A-2	O	Navy	1,200	Solid rocket
Polaris A-3	O	Navy	2,500	Solid rocket
Poseidon	D	Navy	2,800	Solid rocket
Sergeant	O	Army	75+	Solid rocket
Shillelagh	P	Army	short	Solid rocket
Titan II	O	Air Force	6,300+	Storable liquid
Antisubmarine				
Alfa	O	Navy	1,000[3]	Solid rocket
Asroc	O	Navy	5	Solid rocket
Astor	O	Navy	11	Solid rocket
Subroc	O	Navy	25–30	Solid rocket
Antitank				
Entac	O	Army	2,200[3]	Solid rocket
M-72	O	Army	500[3]	Solid rocket
MAW	D	Army	500–1,500[3]	Solid rocket
SS-10	O	Army	1,600[3]	Solid rocket
SS-11	O	Army	3,800[3]	Solid rocket
TOW	D	Army	. . .	Solid rocket
Ship-to-Shore				
Landing-force support weapon	D	Navy	40+	Liquid rocket
Surface-to-Air				
Anti-satellite weapon	O	Air Force	. . .	. . .
Bomarc B	O	Air Force	400	Solid /ramjet
Chaparral	P	Army	2+	Solid rocket
Hawk	O	Army	22	Solid rocket
Nike-Hercules	O	Army	75	Solid rocket
Nike-X dual missile system	P	Army	400+	Solid rocket
Redeye	P	A /Marines	. . .	Solid rocket
Sam-D	D	Army	. . .	Solid rocket
Spartan	P	Navy	400+	Solid rocket
Sprint	P	Army	20–30	Solid rocket
Standard	P	Navy	10–30+	Solid rocket
Talos	O	Navy	65+	Solid /ramjet
Tartar	O	Navy	10+	Solid rocket
Terrier	O	Navy	10+	Solid rocket
Air-to-Air				
Falcon	O	Air Force	5+	Solid rocket
Genie	O	Air Force	6+	Solid rocket
Phoenix	D	Navy	50+	Solid rocket
Sidewinder	O	Navy-AF	2+	Solid rocket
Sparrow III	O	Navy	5–8	Solid rocket
Air-to-Surface				
Bullpup	O	Navy-AF	3–6	Storable liquid
Condor	D	Navy	40	Storable liquid
Folding fin aircraft rocket	O	Navy-AF	. . .	Solid rocket
Hound Dog	O	Air Force	600+	Turbojet
Maverick	D	Air Force	. . .	None
Quail (decoy)	O	Air Force	250+	Turbojet
Quail (advanced)	D	Air Force	400	Turbojet
SRAM	D	Air Force	50–100	Solid rocket
Shrike	O	Navy	. . .	Solid rocket
Walleye	P	Navy	3–6	None
Zuni	O	Navy	5	Solid rocket

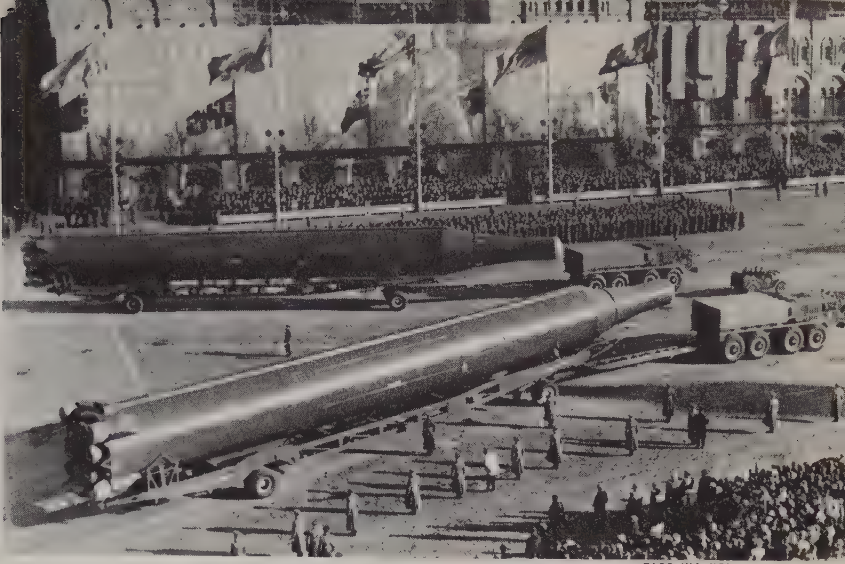
[1] Status code: D, under development; O, operational; P, production; S, study; R, retired. [2] Nautical miles unless otherwise indicated; 1 nautical mile equals 1.15 statute miles or 1.85 km. [3] Range in yards; 1 yard equals 0.91 meters.

Soviet Orbital Missile. On November 18 the USSR acknowledged that (as U. S. officials had suspected for some time) it had developed nuclear missiles that could travel along orbital paths to their targets. U. S. Defense Secretary Robert McNamara had suggested a few days earlier that the Russians had such weapons, and that they would be operational as early as 1968. The weapons could travel three quarters of the way around the world and cross into the United States from the south; this trajectory would evade the Ballistic Missile Early Warning System (BMEWS), which detects only those missiles that cross over the north polar region to reach the United States. The weapon probably would carry a one- to three-megaton bomb.

Secretary McNamara called the weapon a Fractional Orbital Bombardment System, or FOBS. Unlike an ICBM, which climbs 800 miles (about 1,300 km) into space before arcing down toward earth, the FOBS would orbit at an altitude of only about 100 miles (160 km). The secretary volunteered the statement that the FOBS would not violate the outer space treaty ratified by the United States and the USSR on October 10, because it would not travel a full orbit. That is, the space treaty did not elaborate on the meaning of "orbit" when it forbade signatory nations from placing "in orbit around the earth any objects carrying nuclear weapons of mass destruction . . ." U. S. officials consider the FOBS a "terror weapon" only, because in their opinion ICBM's are more accurate and much cheaper; it was indicated that the decision had been made some years ago not to develop a similar kind of weapon for the United States. The FOBS, however, does present serious problems for future defense planning.

North Vietnam. In mid-1967 the North Vietnamese had 200 surface-to-air missile sites for their Soviet-designed SA-2 Guideline missiles, more than twice as many as the year before. However, some of the sites were not occupied, and some were filled with dummy missiles. Of the 3,500 Guidelines fired at U. S. aircraft through September, only 76 caused confirmed or probable aircraft losses. At first glance it might seem that this should have persuaded the North Vietnamese to go to some other system of antiaircraft defense. The fact is that the missiles were very effective in forcing high-flying U. S. bombers to come down closer to the earth in order to avoid being hit, thus bringing them into range of the devastating fire of the 8,000-gun North Vietnamese air defense.

Israeli-Arab War. The Israeli army captured an estimated $2 billion worth of Arab military equipment in the war in June. Three kinds of Soviet-built guided missiles were in the booty, giving Western technicians their best chance to study modern Russian weapons thoroughly. Atolls—infrared-guided, air-to-air missiles—were found at the Egyptian El Arish airbase in northern Sinai. Powered by a solid-propellant motor, Atoll is 110 inches (279 cm) long and 4.75 inches (12 cm) wide. Several Atolls were fired at Israeli aircraft in the war, but without any known kills.



NEW SOVIET MISSILE is rolled through Moscow's Red Square, November 7. According to the Soviets, the 3-stage missile can be used for intercontinental or orbital launches.

TASS VIA UPI

The Guideline missile also captured was of high interest because of its use by North Vietnam. This 35.5-foot (10.8-meter) missile is guided automatically by ground radar, weighs nearly 5,000 pounds (2,250 kg), and has a solid-propellant booster and liquid-fueled sustainer.

The third important missile taken by the Israelis was Snapper, an antitank weapon wire-guided by an operator who sits in a lightweight utility car. Snapper has a range of about half a mile (0.8 km), weighs about 50 pounds (22 kg) at launch, and can penetrate 13-inch (33-cm) armor.

The only effective use Egypt made of the missiles was to sink the Israeli destroyer *Elath* in the cease-fire period following the war. The vessel was roughly 12 miles (19 km) off the Sinai Peninsula when the Egyptians fired four surface-to-surface Soviet missiles (code-named Styx) from what evidently were Soviet-made torpedo boats. The radar-guided Styx is about 20 feet (6 meters) long, has a range of about 15 miles (24 km), and is boosted by a large solid-propellant motor. Noting the success of Styx, U. S. Navy officials regretted that their service had abandoned development of the Regulus deck-fired missile in an economy wave in 1958.

U. S. AEROSPACE DEFENSE

The United States responded to the threats posed by the new Soviet and Communist Chinese developments in weaponry by making a long-debated change in its policy of aerospace defense.

"Thin Line" Sentinel System. On September 18 Defense Secretary McNamara announced that the United States had decided to produce and deploy the Nike-X ABM system, to be known as the Sentinel system. It would be designed to thwart a missile attack by Communist China. The U. S. military, by this decision, clearly abandoned its hope that its poised missile arsenal would deter an aggressor from using nuclear weapons against the United States. However, the military still believed that fear of retaliation was sufficient to keep Russian missiles on their launch pads. They also held to the opinion that if one nation escalated its strategic defensive or offensive forces, so would the other, thereby leaving the relative military positions unchanged.

The United States set its sights on having a "thin line" Sentinel system deployed and in operation by the time the Chinese were expected to have their own ICBM's. It hoped to have the first battery operational in the early 1970's; the whole system will consist of 15 to 20 Spartan and Sprint missile batteries deployed throughout the nation. The program will cost about $5 billion, but this does not include the operational costs of about $500 million a year. The average cost of each missile will be, roughly, $1 million. Spartan is a 54.4-foot (16.6-meter), solid-propellant, 3-stage missile; the Sprint is 27 feet (8.2 meters) long. Spartan will seek targets about 400 miles (640 km) away and generally outside the atmosphere. Sprint will intercept targets within the atmosphere at a range of about 15 to 25 miles (24–40 km).

X-Ray Warhead. Both missiles will be armed with nuclear warheads. The Spartan warhead, still under secret development, was dubbed by the press a "Spectrum" bomb; this refers to the complete spectrum of X-rays that the warhead will emit when it detonates. The X-rays are supposed to destroy incoming enemy warheads, which could not be shielded against the heating effects of the entire spectrum of such radiation. This concept of an X-ray warhead is also under development by the USSR.

Over-the-Horizon Radar. The Defense Department recognizes that the United States could not stop an attack of ICBM's carrying multiple warheads; in fact, officials in 1967 foresaw no way to stop a single ICBM before the Sentinel system was operational. The best that could be hoped for would be to get 15 minutes' warning time from BMEWS. The Russian orbital missile cuts down even this warning time, perhaps to less than 3 minutes.

One way at least to recapture the 15-minute interval would be through an over-the-horizon (OTH) radar system. The United States may have an OTH system operating in 1968. The radar, focusing on Soviet launch pads, would send radio signals bouncing between the earth's surface and the ionosphere. Some of the signals, reflected by the ionized particles in a missile's exhaust, would return to the transmitting station. In this way the launch of an FOBS could be detected. (Soviet engineers could, however, form ionized plumes in the atmosphere by other means, to confuse the U. S. radar system.) An FOBS conceivably could be knocked down by the advanced Spartan ABM that is being developed. It is designed to be able to loiter for a short time in space, in order to detect and destroy an FOBS.

WILLIAM S. BELLER
Author, "The American Arsenal"

DEFENDANTS on trial in Mississippi in connection with the 1964 slaying of three civil rights workers are (*left to right*) Deputy Sheriff Cecil Price, policeman Richard Willis, and Sheriff Lawrence Rainey. Price was the only one to be convicted.

UPI

MISSISSIPPI

The election of Democratic U. S. Rep. John Bell Williams as governor of Mississippi, along with a solid slate of Democratic state officials, was the major political event in the state in 1967. In October, national attention was focused on the conviction of 7 of 18 persons accused in the 1964 slaying of three civil rights workers near Philadelphia, Miss.

Elections. Quadrennial state and local elections were held in all parts of Mississippi in 1967. As usual, interest centered on the Democratic primaries, which attracted numerous candidates. In the primary on August 8, a total of 684,000 voters participated, an increase of nearly 50% over the total in 1963. Most of the increase was attributed to the fact that approximately 190,000 Negroes were registered and eligible to vote, most of them for the first time. In many of the contests no candidate received the majority required for nomination, and the two leading contenders for each office faced each other in the runoff primary on August 29.

NATIONAL GUARDSMEN enforced a 10 P. M. curfew following student rioting at Jackson State College on May 12.

WIDE WORLD

JACKSON STATE COLLEGE

The Democratic nomination for governor was won by John Bell Williams, who had been disciplined by the party caucus with loss of seniority in the U. S. House of Representatives because of his support of the Republican candidate, Barry Goldwater, in the 1964 presidential campaign. Williams, long identified with the strong segregationist viewpoint in the state, defeated State Treasurer William Winter, who was identified with the more moderate element, by a margin of about 60,000 votes. Charles Sullivan, also a strong conservative and segregationist, won the lieutenant governorship over Roy Black by an even larger margin.

Rubel Phillips, the Republican candidate opposing Williams in the election on November 7, made an unorthodox appeal to the voters by proposing a program of economic and educational improvement to include the Negro population. Williams was elected overwhelmingly, with more than 70% of the total vote. (He took office on Jan. 16, 1968, succeeding Democratic Gov. Paul B. Johnson, who was ineligible constitutionally to seek reelection.) No other Republican was a candidate for statewide office, although several Republicans tried for seats in the legislature and a larger number ran for local offices.

Robert C. Clark, a Negro educator running as an independent from Holmes county, defeated incumbent state Rep. J. P. Love and became the first Negro to be elected to the Mississippi legislature in the present century. Twenty-one other Negroes won various county and local offices. Early in December, Love initiated a challenge proceeding, asking that the state House of Representatives bar Clark from his seat because of alleged irregularities in the election, but the proceeding was dropped before the 1968 session opened.

Reapportionment. The court-ordered reapportionment of the state legislature, adopted by the members in a special session in late 1966, was challenged before the court in January 1967 on the grounds that it discriminated against Negroes. In March the court invalidated the legislature's plan and substituted one of its own, which it ordered into effect immediately. The 3-judge federal panel also retained jurisdiction over the apportionment issue.

Civil Rights Murder Trial. Another chapter in the history of one of the state's most widely publicized crimes—the murder of three civil rights workers, James Chaney of Mississippi and Michael Schwerner and Andrew Goodman of New York, in Neshoba county in 1964—was written with the trial of 18 persons in federal district court in Meridian. They were tried under a federal law of 1870 for conspiracy to deprive the victims of their civil rights. On October 20, after an 11-day trial, the all-white jury convicted seven of the defendants, including a deputy sheriff and persons identified as Ku Klux Klan leaders. Eight were acquitted, and a mistrial was declared in the case of three. On December 29, Judge Harold Cox sentenced the convicted men to prison terms ranging from 3 to 10 years.

Racial Disorders. Continued outbreaks of violence were noted in the state's efforts to adjust to integration. Laurel, where there were prolonged labor difficulties, was the scene of four bombings during the year, although only one of those was thought to be connected with racial tension. Several bombing incidents were reported in the Jackson area. Most of these acts have been attributed to Klan activities, although no arrests have been made. Student riots at Jackson State College, a Negro institution, on May 11–13 resulted in one death.

Integration of the educational system proceeded without incident. A survey in November indicated that approximately 13,000 Negro children were attending desegregated public schools and that about 450 teachers were teaching in integrated faculties. This number was double that of the previous year. Of the 149 school districts in the state, 23 were deprived of federal funds because of noncompliance with regulations on integration.

Tornadoes. Violent storms hit the Gulfport coastal area on October 30, killing 3 persons, injuring 100, and causing property damage estimated at more than $7 million.

C. N. FORTENBERRY
University of Mississippi

MISSISSIPPI • Information Highlights

Area: 47,716 square miles (123,585 sq km).
Population: 2,348,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Jackson, the capital, 161,000; Meridian, 53,500; Biloxi, 46,500; Greenville, 45,400; Hattiesburg, 38,500; Gulfport, 33,500.
Government: *Chief Officers* (elected Nov. 1967; take office, Jan. 1968)—governor, John Bell Williams (Democrat); lt. gov., Charles L. Sullivan (D); secy. of state, Heber Ladner (D); atty. gen., Joe T. Patterson (D); treas., Miss Evelyn Gandy; supt. of pub. instr., Garvin Johnston; chief justice, W. N. Ethridge, Jr. *Legislature* (no regular session in odd years; convenes Jan. 2, 1968)— Senate, 52 members (52 Democrats); House of Representatives, 122 members (121 Democrats, 1 Independent).
Education: *School enrollment* (1965–66)—public elementary, 369,600 pupils (11,475 teachers); public secondary, 238,400 pupils (8,800 teachers); nonpublic, 21,000 pupils (920 teachers); college and university (fall 1965), 55,790 students. *Public school expenditures* (1965–66)—$169,322,000 ($318 per pupil); average teacher's salary, $4,190.
Public Finance (fiscal year 1965): *Revenues*, $486,176,000 (general sales and gross receipts tax, $108,818,000; motor fuel tax, $58,038,000; federal funds, $135,936,000). *Expenditures*, $469,079,000 (education, $169,941,000; health, welfare, and safety, $96,378,000; highways, $132,153,000).
Personal Income (1966): $4,153,000,000; average annual income per person, $1,777.
Public Assistance (fiscal 1967): $56,854,029 to 168,968 cases (aged, $34,766,936; dependent children, $9,325,692).
Labor Force (employed persons, July 15, 1967): *Agricultural*, 122,300; *nonagricultural* (wage and salary earners), 524800 (31.2% manufacturing, 19.4% trade, 21.9% government). *Unemployed persons* (Aug. 15, 1966)—29,200.
Manufacturing (1965): Value added by manufacture, $1,199,091,000 (trans. equipment, $71,242,000; nonelec. machinery, $73,464,000; elec. machinery, $67,038,000; fabricated metals, $68,096,000; food and products, $157,588,000).
Agriculture (1966): *Cash farm income*, $908,098,000 (livestock $398,004,000; crops, $385,567,000; govt. payments, $124,527,000). *Chief crops* (tons)—cottonseed, 552,000 (ranks 2d among the states); cotton lint, 324,000 (rank, 2d); soybeans, 1,207,584; hay, 1,074,000; corn for grain, 438,060.
Mining (1966 est.): *Production value*, $202,613,000. *Chief minerals* (tons)—sand and gravel, 7,602,000; stone, 1,964,000; clays, 1,559,000; natural gas, 146,800,000,000 cubic feet; crude petroleum, 55,200,000 barrels.
Fisheries (1966 est.): *Commercial catch*, 273,100,000 pounds ($9,500,000). *Leading species* (1965)—menhaden, 278,104,210 pounds ($3,972,568); shrimp, 8,232,989 pounds ($2,522,758); red snapper, 2,365,320 pounds ($589,470).
Transportation: (1966): *Roads*, 65,416 miles (105,254 km); *motor vehicles*, 1,011,712; *railroads*, 4,929 track miles (7,932 km); *airports with scheduled services* (1967), 13.
Communications (1966): *Telephones* (1967), 672,400; *tv stations*, 8; *radio stations*, 108; *newspapers*, 19.

MISSOURI

Gov. Warren E. Hearnes continued his record of successes with the Democratic-controlled Missouri state legislature in 1967. Of the 25 bills proposed by the governor, 23 were enacted into legislation during the session. The General Assembly appeared to be more responsive to the needs of the state's urban areas than in the past, following reapportionment of its lower house in 1966.

Legislation. In 1967 the legislature passed several bills with urban support that had been proposed but not passsed for over a decade. St. Louis was authorized to vote on a nonpartisan court plan. The St. Louis public school system, formerly under 4-man leadership, was placed under a single administrator. The sale of liquor by the drink was authorized in unincorporated areas of St. Louis county, including St. Louis Lambert Airport. The legislature

MISSOURI • Information Highlights

Area: 69,686 square miles (180,487 sq km).
Population: 4,605,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Jefferson City, the capital, 29,700; St. Louis, 710,000; Kansas City, 530,000; Springfield, 103,500; Independence, 97,000; St. Joseph, 77,000.
Government: *Chief Officers*—governor, Warren E. Hearnes (Democrat); lt. gov., Thomas F. Eagleton (D); secy. of state, James C. Kirkpatrick (D); atty. gen., Norman Anderson (D); treas., M. E. Morris; comm. of education, Hubert Wheeler; chief justice, Clem F. Storckman. *Legislature*—General Assembly (met Jan. 4-June 30, 1967; convenes Jan. 8, 1969): Senate, 34 members (11 Republicans, 23 Democrats); House of Representatives, 163 members (56 R, 107 D).
Education: *School enrollment* (1965–66)—public elementary, 618,201 pupils (24,668 teachers); public secondary, 359,527 pupils (12,372 teachers); nonpublic schools, 189,500 pupils (6,360 teachers); college and university (fall 1965), 135,652 students. *Public school expenditures* (1965–66)—$399,402,000 ($471 per pupil); average teacher's salary, $5,857.
Public Finance (fiscal year 1967): *Revenues*, $945,814,595 (sales tax, $256,142,000; motor fuel tax, $97,297,000; federal funds, $283,534,801). *Expenditures*, $899,802,585 (education, $308,521,941; health, welfare, and safety, $234,548,227; highways, $215,087,207). *State debt*, $45,370,000 (June 30, 1967).
Personal Income (1966): $12,856,000,000; average annual income per person, $2,817.
Public Assistance (fiscal year 1967): $139,228,000 to 227,268 recipients (aged, $81,197,534; dependent children, $32,394,367).
Labor Force (employed persons, July 1967): *Agricultural*, 2,071,400; *nonagricultural* (wage and salary earners), 1,580,500 (28.6% manufacturing, 22.2% trade, 15.8% government). *Unemployed persons* (July 1967)— 73,800.
Manufacturing (1965): Value added by manufacture, $5,122,161,000 (transportation equipment, $1,234,690,000; primary metals, $187,515,000; nonelectrical machinery, $368,141,000; electrical machinery, $289,548,000.
Agriculture (1966): *Cash farm income*, $1,521,200,000 (livestock, $918,027,000; crops, $465,672,000; govt. payments, $138,501,000). *Chief crops* (tons)—Corn for grain, 4,937,184; hay, 4,873,000; soybeans, 2,391,900; wheat, 1,234,200; sorghum, 293,216; oats, 157,440.
Mining (1966): *Production value*, $227,970,000. *Chief minerals* (tons)—stone, 35,240,000; sand and gravel, 10,702,000; bituminous coal, 3,582,000; clays, 2,329,000.
Transportation: *Roads* (Dec. 1966), 100,718 miles (162,055 km); *motor vehicles* (1966), 2,085,000; *railroads* (1965), 7,059 track miles (11,360 km); *airports with scheduled service* (1967), 11.
Communications: (1967) *Telephones*, 2,305,500; *television stations*, 18; *radio stations*, 104; newspapers (1966), 57 (daily circulation, 1,828,945).

UPI

FORMER PRESIDENT TRUMAN receives a visit from President Johnson at Independence, Mo., on September 14.

passed a proposed constitutional amendment to lower the majority vote needed to pass a bond issue from two thirds to 60%. Legislation was also passed requiring statewide automobile inspection. Beginning on Jan. 1, 1969, Missouri automobile owners will have to pass safety inspections within 30 days of renewing their registrations.

Congressional Reapportionment. For the third time since 1961 the state's ten federal congressional districts were redrawn. On January 9 the U. S. Supreme Court ruled the 1965 Missouri congressional redistricting law unconstitutional because it created unjustified population variations among the districts. The new court-ordered redistricting revised the districts so that none varied more than 4.3% from the average district size of 432,000. The First Congressional District, in the St. Louis area, was redrawn to include most of the area's Negro population. The redrawing of the district could place the state's first Negro representative in Congress in the near future.

Missouri River Flood. Heavy rains at the end of June caused waters of the Missouri River to climb well above flood stages, threatening many parts of Missouri. The regular flood levees were reinforced with sandbags in the St. Charles area and elsewhere in the state. Although there was widespread flooding in western Missouri and eastern Kansas, no serious damage was done near St. Charles or St. Louis. Authorities claimed that more serious flooding was averted by the extensive flood control measures taken in recent years. A special variety of mosquito, hatched as a result of the high waters, plagued residents of the St. Louis area during much of July.

Governors' Conferences. On two occasions in 1967 Governor Hearnes was the host at meetings of other state governors in Missouri. On July 1, 17 Democratic governors met in St. Louis to establish more effective organizational ties and to iron out federal-state controversies. President Johnson visited the city to address the conference. At the end of August, the governor served as host at the Midwestern Governors' Conference at Osage Beach.

Meramec Basin Development Plan. The Meramec Basin Association proposed a comprehensive development program in 1967 for the 400-square mile (1,000 sq km) Meramec River basin area just southwest of the St. Louis metropolitan area. The plan calls for the building of five major reservoirs for flood control and recreation purposes, as well as extensive facilities for camping, picnicking, boating, and fishing. The program would contribute to the economic development of the area, conserve water and land resources, and provide needed recreational facilities for St. Louis. The total cost of the overall development program is estimated at more than $142 million.

RICHARD E. DAWSON
Washington University, St. Louis

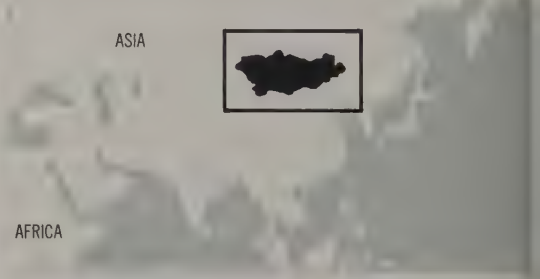
MONEY. See BUDGET, U. S.; COIN COLLECTING; INTERNATIONAL FINANCE.

MONGOLIA

The Mongolian People's Republic, led by Premier Yumzhagiyn Tsedenbal, continued unswervingly throughout 1967 to support the USSR against China in the Sino-Soviet dispute. It also echoed Soviet approval of the Arabs against Israel, and supported the Soviet call for an international meeting of Communist parties to coordinate the international Communist movement.

Dispute with China. Mongolia's relations with China worsened during 1967. Red Guards in Peking demonstrated several times during the year

MONGOLIA • Information Highlights



Area: 604,246 square miles (1,565,000 sq km).
Population: 1,140,000 (mid-1966 est.).
Chief Cities (1967 est.): Ulan Bator, the capital, 250,000; Darkhan, 35,000.
Government: *Chief of State*—Zhamsarangin Sambu (took office July 1954); *Premier*—Yumzhagiyn Tsedenbal (took office January 1952). *Parliament*—Great People's Khural, 287 members (all belonging to the Mongolian People's Revolutionary party).
Principal Religious Faiths: Buddhism and Islam.
Education: *Literacy rate* (1966), 99% of population aged 9–50. *Total school enrollment* (1966)—188,300 (primary and secondary, 170,000; vocational, 9,700; higher, 8,600).
Finance (1966 budget est.): *Revenues*, $386,000,000; *expenditures*, $384,000,000; *monetary unit*, tugrik (4 tugriks equal U. S.$1).
Industrial Production Index (1965): 166 (1960=100).
Manufacturing (metric tons, 1965): Gasoline, 17,000; distillate fuel oils, 7000.
Crops (metric tons, 1965): Grain, 354,400.
Minerals (metric tons, 1965): Coal, 989,500; fluorspar, 75,000; lime, 35,000; alabaster (gypsum), 20,000; crude oil, 15,900; salt, 8,000.
Foreign Trade (1965 est.): *Exports*, $75,000,000 (chief export: fluorspar); *imports*, $150,000,000 (chief imports: iron and steel, mineral fuels, cement). *Chief trading partners:* USSR; East Europe.
Transportation: *Roads* (1961), 46,700 miles (75,154 km); *railways* (1965), 887 miles (1,427 km); *national airline*, Mongolair; *principal airport*, Ulan Bator.
Communications: *Telephones* (1967): 14,200; *television stations* (1967), 1; *radios* (1966), 61,000; *newspapers* (1963), 2 (daily circulation, 92,000).

against Mongolia and manhandled officials of the Mongolian embassy, and Mongols retaliated against Chinese diplomats in Ulan Bator. The Mongols also expelled three Chinese teachers in May for alleged anti-Mongolian propaganda.

In the Inner Mongolian Autonomous Region (which is part of Communist China), Ulanfu, the long-time leader of the Inner Mongolian party, government, and military, was reportedly dismissed early in May. However, clashes between the Red Guards and supporters of Ulanfu were reported as late as September.

Urban Growth. The seven-year-old city of Darkhan, reached a population of 35,000 in 1967, thus becoming the second-largest urban center in the country. Ulan Bator, the capital, has a population of about 250,000. Future plans call for continued growth of Darkhan and systematic development of the city of Choibalsan, in the eastern part of the country.

Economic Affairs. The Mongolian People's Republic continued in 1967 to carry on most of its foreign trade with the USSR. The Soviet Union continued in effect to subsidize the country's economy by sending a far greater ruble-value of goods and machinery to Mongolia than it received in return in the form of wool, meat, and other items.

The Ulan Bator television station began broadcasting in the fall.

ROBERT A. RUPEN
University of North Carolina

MONTANA

Controversy over a proposed sales tax occupied much of the regular session of the 40th Legislative Assembly. The final defeat of the proposed sales tax forced Gov. Tim Babcock to call a special session to deal with the state's financial problems.

Legislation. During the regular session, the assembly proposed three constitutional amendments to be referred to the voters in the 1968 elections. The amendments propose that legislative sessions be lengthened from 60 to 80 days; that six rather than three amendments be permissible on the ballot at a single election; and that salaries of state officials might be raised during a term of office. The legislature also returned the primary election to June instead of August.

In other legislation the assembly extended workmen's compensation coverage for injuries resulting in death from 500 to 600 weeks. Monthly payments to persons suffering from silicosis (a disease of the lungs) were increased from $90 to $125 per month, and nurses were given the right to bargain collectively for two years on a trial basis. A revised criminal law code was adopted, along with a stronger air pollution bill, and a medicaid bill. The assembly also asked the legislative council to study ways of updating Montana's 78-year-old constitution, adopted a long-term state building program, and gave approval to three regional clinics for the mentally ill.

The assembly also enlarged the state's educational foundation program, and authorized a vocational-technical program in the public schools. The budget of the university system was increased by 30%, and teachers' pensions were raised.

Late in the regular session, the proposed 3% sales tax, which would have been the first in the state's history, was defeated. At a special session, the Legislative Assembly met the state's financial needs by raising the income tax to produce $31 million instead of $25 million each year. It also raised the gas tax from 6¢ to 6½¢.

MONTANA • Information Highlights

Area: 147,138 square miles (381,088 sq km).
Population: 701,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Helena, the capital, 22,000; Great Falls, 64,500; Billings, 58,000; Missoula, 27,600.
Government: *Chief Officers*—governor, Tim Babcock (Republican); lt. gov., Ted James (R); secy. of state, Frank Murray (Democrat); atty. gen., Forrest H. Anderson (D); treas., Dr. Henry H. Anderson; supt. of publ. instr., Harriet E. Miller; chief justice, James T. Harrison. *Legislature*—Legislative Assembly (met Jan. 1–March 18, 1965, convenes Jan. 6, 1969): Senate, 55 members (25 Republicans, 30 Democrats); House of Representatives, 104 members (64 R, 40 D).
Education: *School enrollment* (1965–66)—public elementary, 112,250 pupils (5,100 teachers); public secondary, 58,750 pupils (2,700 teachers); nonpublic schools, 23,300 pupils (950 teachers); higher (fall 1965), 20,308 students. *Public school expenditures* (1965–66)—$89,000,000 ($580 per pupil); average teacher's salary $5,800.
Public Finance (fiscal year 1967): *Revenues*, $288,955,735 (total sales and gross receipts tax, $63,748,304; motor fuel tax, $19,105,748). *Expenditures*, $283,267,613 (education, $72,382,371; health, welfare, and safety, $79,093,106; highways, $78,855,829). *State debt*, $66,897,000 (June 30, 1967).
Personal Income (1966): $1,842,000,000; average annual income per person, $2,623.
Public Assistance (fiscal year 1967): $12,245,429 to 19,414 recipients (aged, $3,637,388; dependent children, $3,870,155).
Labor Force (employed persons, July 1967): *Agricultural*, 53,200; *nonagricultural* (wage and salary earners), 229,400 (10.9% manufacturing, 20.4% trade, 22.3% government). *Unemployed persons* (July 1967)—13,000.
Manufacturing (1965): Value added by manufacture, $284,809,000 (lumber and wood products, $75,376,000; primary metals, $72,443,000; stone, clay, and glass products, $12,009,000; printing and publishing, $17,256,000.
Agriculture (1966): *Cash farm income*, $567,783,000 (livestock, $288,299,000; crops, $215,030,000; govt. payments, $64,454,000). *Chief crops* (tons)—barley, 1,525,536 (ranks 3d among the states); hay, 3,297,000; wheat, 3,036,360.
Mining (1966): *Production value*, $245,359,000. *Chief minerals* (tons)—sand and gravel (est.), 13,000,000; stone (est.), 6,000,000; bituminous coal (est.), 425,000; lime (est.), 196,000; copper, 128,061; crude petroleum, 35,405,000.
Fisheries (1965): *Commercial catch*, 354,000 pounds ($32,000).
Transportation: *Roads* (Dec. 1966), 74,584 miles (120,006 km); *motor vehicles* (1966), 502,935; *railroads* (1967), 6,707.5 track miles (10,792 km); *airports* (1967), 15.
Communications (1967): *Telephones* (1966), 296,800; *television stations* 8; *radio stations*, 45; *newspapers*, 16 (daily circulation, 608,170).

Industry and Agriculture. A strike in the copper industry, the longest in Montana's history, began July 15 and continued into 1968. The strike, which affected the whole economy, caused severe depression in mining areas. Wastes from the closed copper refineries caused serious pollution of the Clark Fork River below Anaconda for about six weeks, until a court injunction caused the company to put men to work purifying the water.

Other events that affected the state's economy during 1967 were the opening of a rich oil field in Powder River county, which touched off a record number of wildcat wells; and the announcement that the U. S. Air Force base north of Glasgow would be deactivated on July 1, 1968. Heavy rains, which caused extensive flooding in central Montana in June, helped to produce a record wheat crop.

Governors' Conference. The Western Governors' Conference was held in West Yellowstone in June. Attention was focused on Gov. Ronald Reagan's desire for water for California from the Northwest.

Parks. Fires in the Glacier Park region burned about 10,000 acres. Montana Indians and Eskimos from Alaska aided in fighting the fires. Plans were made to facilitate winter travel to several of the major centers in Yellowstone National Park.

MERRILL G. BURLINGAME
Montana State University

UPI

A STATION IN THE METRO, Montreal's new subway system, which drew praise from visitors to Expo 67 for its quiet, swift service and its modern good looks.

MONTREAL

A dual celebration was held in Montreal in 1967. The city was the site of Expo 67, the highly successful world's fair held to honor the 100th anniversary of Canadian confederation. Montreal also celebrated the 325th anniversary of the founding of the city, now Canada's largest (1967 est. city pop., 1,430,000; 1967 est. metropolitan area pop., 2,436,000).

Expo 67. As the first world exhibition in the first-class category ever held in North America, Expo drew a total of 50,063,649 visitors between April 28 and October 29. August was the month of largest attendance (10,197,477); and Sunday, April 30, the day of largest attendance.

Among the distinguished visitors to Expo were Queen Elizabeth (July 3), Princess Margaret (October 6), President Lyndon Johnson (May 25), French President Charles de Gaulle (July 24 and 25), and numerous other heads of state and royal persons. President de Gaulle's maladroit encouragement of Quebec separatism in a speech in Montreal on July 24 prompted a sharp rebuke from the Canadian government and caused the remainder of his Canadian visit to be canceled. (See also QUEBEC.) This incident was the only jarring note during the exhibition. However, the month-long strike of Montreal bus and subway workers, which began on September 21, seriously affected the attendance at Expo and curtailed services at the fair.

Two of the most widely admired buildings at Expo were the geodesic dome of the United States pavilion and Habitat 67, a modernistic apartment block. Outstanding in a symbolic sense was the Christian pavilion, cooperatively erected and maintained by the major Canadian Christian churches. (See also EXPO 67.)

Politics and Civic Planning. Montreal continued to be governed by the Civic party (Parti Civique), with Jean Drapeau, its leader, as mayor. (The Civic party is the sole political party in Canada operating only on a municipal level, and Mayor Drapeau is much like a prime minister.) Montreal's relations with its surrounding municipalities improved with the toning down of the Civic party's "one big city" campaigns.

The Quebec provincial administration in general, and Minister of Municipal Affairs Paul Dozois specifically, showed little enthusiasm for municipal mergers. Nevertheless, in September the Montreal Planning Department released its ambitious "Horizons 2000," a master plan for a vastly extended metropolitan area, based on the probable developments of the next 30 years. The plan visualized an east-west industrial axis, following the line of the St. Lawrence River, and a residential north-south axis. The axes extended about 35 miles in either direction from the center of Montreal.

Economic Progress and Social Instability. The consistently satisfactory rate of economic development in Montreal was jeopardized by serious inflation in 1967. The city administration was impelled to impose higher taxes (including a surtax on certain types of real estate) to meet the heavy carrying charges of its $700 million debt. The increased provincial sales tax of 8% was felt keenly in Montreal. Services were interrupted by strikes of municipal workers, including clerical staffs. There was a strike of teachers in Roman Catholic schools between January 1 and February 21, and a strike of bus and subway workers between September 21 and October 21.

Effective means of economic stabilization lay outside the resources (and the legal powers) of the city. Rent control measures, enacted by the province to curtail rises in rent during the Expo 67 period, proved ineffective, and the rooming service Logexpo occasioned bitter complaints. In July the U. S. Post Office denied certain motel operators the use of its mails, alleging fraudulent advertising.

Construction. Montreal's new $25 million hotel, Le Château Champlain, opened in January. Its controversial design has already made it a landmark in the downtown area. (See INTERIOR DECORATION.) The Place Bonaventure trade center, built to bring together all facets of trade, opened in May. The world's second-largest commercial building, it contains 3.1 million square feet of gross space.

JOHN I. COOPER
McGill University

MORGENTHAU, Henry Jr.

U. S. public official: b. New York, N.Y., May 11, 1891; d. Poughkeepsie, N.Y., Feb. 6, 1967.

As secretary of the treasury from January 1934 to July 1945, Henry Morgenthau, Jr., spent more money than all 51 of his predecessors combined. He held the office longer than any one else except Albert Gallatin in the early years of the nation. When Morgenthau took office the country was suffering from the worst economic depression in its history. At that time national expenditures were $7.1 billion a year; a month before the end of World War II, when Secretary Morgenthau resigned his post, annual expenditures amounted to $93.7 billion. Not once in the more than 11 years that he directed the U. S. Treasury—years during which the budget increased by 13 times—was there even a hint of scandal.

Background and Early Life. Morgenthau was the son of a wealthy New Yorker who was a prominent Democrat and the U. S. ambassador to Turkey from 1913 to 1916. Young Morgenthau studied architecture at Cornell University for three semesters before withdrawing. In 1913 he purchased a farm in Dutchess County, N. Y., and settled down to a life of farming.

Entry into Politics. Morgenthau's 1,700-acre farm was situated near the Roosevelt family estate in Hyde Park, N. Y., and he became a close friend of Franklin D. Roosevelt. When the latter was elected governor of New York in 1928, he appointed Morgenthau as chairman of the Agricultural Advisory Committee. In 1930, Morgenthau was made commissioner of conservation, and, with Harry Hopkins, devised a reforestation project that presaged many New Deal measures. When Roosevelt was elected president in 1932, Morgenthau was named to head the Farm Credit Bureau.

Financing the New Deal. By the close of 1933, the Farm Credit Bureau had averaged $1 million a day in loans and had been successful in averting total collapse in the agricultural economy. When a schism developed over national fiscal policy, Morgenthau was named acting secretary of the treasury in November 1933 and secretary in January 1934.

As secretary, Morgenthau struggled to stabilize the value of the dollar, which had been devalued by the emergency financial measures instituted by the New Deal. Operating with a large stabilization fund, he bought and sold foreign currencies, gold, and dollars on the world market. After the Munich conference of 1938 which stabilized international trading values, the dollar emerged as the strongest currency in the world.

Later Career. During the war, Secretary Morgenthau concentrated his energies on the sales of war bonds. He conceived the lend-lease program and was a leader in wartime meetings that resulted in U. S. participation in the International Monetary Fund and the World Bank.

Morgenthau's scheme to turn a defeated Germany into a helpless agrarian nation was opposed by President Truman and led to the secretary's resignation in July 1945.

UPI

HENRY MORGENTHAU, secretary of the treasury under President Franklin Roosevelt, died in February. He is shown here in a photograph made during a 1944 radio broadcast.

The last years of Morgenthau's life were devoted to philanthropic causes.

GENE SMITH
The New York "Times"

MORMONS. See CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS.

MORO, Aldo. See biographical sketch under ITALY.

MOROCCO

Morocco's serenity under the "state of emergency" proclaimed in June 1965 continued throughout 1967. Tension briefly developed during the Israeli-Arab war in June, when the dormant political parties tried to make use of mass frustrations over Arab ineffectiveness in warfare to demonstrate that they still represented popular forces. In the end, however, King Hassan II weathered the storm of internal boycotts against Jewish businessmen, anti-Americanism, and a general strike.

War Crisis. King Hassan expressed his solidarity with the Arab cause by dispatching a contingent of 6,000 soldiers toward the front, only to recall them at the moment of the cease-fire, before they had crossed the Libyan desert. The King portrayed the Israeli-Arab war as part of a "holy war." By viewing the defeat in spiritual terms and claiming that the Arabs lost the war because they had strayed from God's path, Hassan attempted to strengthen the basis of his own claims to religious legitimacy as a descendant of Mohammed.

Throughout the crisis King Hassan sought to calm the roused populace. In so doing he stressed the equality of citizens under law and assured the country's Jewish minority (about 60,000 at the beginning of June) that their rights would be guaranteed. While the opposition aligned itself with the Algerian position—that the Palestine struggle was of vital concern to all Arab states—the king remained aloof and became involved only nominally and only when participation promised to enhance royal prestige.

A general strike was called on July 8 by the Moroccan labor unions (UMT) after their secretary general, Mahjoub Ben Seddik, was arrested for sending an allegedly provocative telegram to the king criticizing Morocco's official position during the crisis. The impotence of the opposition became evident during the course of the strike, which fizzled out in a matter of days. When Ben Seddik was sentenced on July 18 to 18 months in prison, no one protested.

Politics. Morocco has been governed since June 1965, without a functioning parliament or a constitution, by a government headed by, appointed by, and responsible to the king. Political meetings are prohibited throughout the kingdom unless sanctioned by the minister of the interior. A general malaise has developed among the political elite, and few observers expect that elections will be held in the near future that might help to redefine the situation. Popular grievances fester, but politicians are in no position to channel them against those holding power.

In 1967 the king eliminated the remaining political appointees in his cabinet, leaving loyal servants of the crown and technicians in ministerial posts. Although Hassan has relinquished the position of premier to Mohammed Benhima, in no way has he reduced his own power. Instead, the king has created a series of "kitchen cabinets" parallel to the ministries, which are directly responsible to the royal cabinet. That body, headed by Driss M'hammedi, more than the council of ministers, controls decisions.

The army greatly increased its role in politics during 1967. Most new rural administrators (caids) now either receive paramilitary training or are drawn directly from military personnel. In a structural reform and general reorganization of the armed services in the fall, the king, as commander in chief and chief of staff, centralized command and created new posts, exemplifying the army's growing importance.

Foreign Affairs. During the year Morocco attempted to remain aloof from all international blocs, reinforcing its traditional isolationist tendencies, and at the same time maintained friendly relations with both East and West. French President de Gaulle remained adamant, however, and refused to exchange ambassadors with Morocco as long as Gen. Mohammed Oufkir continued to serve as interior minister. On June 5, a French court sentenced Oufkir in absentia to life imprisonment for complicity in the kidnapping from a Paris street of Moroccan opposition leader Mehdi Ben Barka in October 1965.

The United States and the Soviet Union provided vital assistance to make up for the loss of French aid. King Hassan paid a visit in February to the United States, where he received a pledge of $14 million worth of arms and 170,000 tons of wheat. Hassan also cultivated the friendship of oil-rich Libya, Saudi Arabia, Kuwait, and Iran, which likewise contributed aid to Morocco or absorbed its surplus labor.

Intensified negotiations with Spain led to a verbal agreement under whose terms Spain is to turn over the enclave of Ifni to Morocco in 1968.

In the continuing border dispute with Algeria, Hassan appealed for an end to the arms race between the two countries, and then quietly agreed not to press Morocco's claims to territory controlled by Algeria. Relations between the two states were thus allowed to mellow. In an attempt, however, to narrow Algeria's weapons lead, Morocco negotiated a purchase of $16 million worth of arms from Czechoslovakia in the fall.

Economy. Serious crop failures for two consecutive years, due to drought and poor administration of state farms, upset all economic plans in Morocco. The purchasing power of the peasantry was reduced, and this in turn led to crises in the country's nascent industries, which are dependent on local consumption.

Unemployment remained a serious problem in 1967. As the year ended about 780,000 urban males were unemployed, and 100,000 additional adults were entering the labor market annually.

Morocco's long-term economic prosperity will depend on how successful projects initiated in 1967 will be, notably numerous irrigation works, massive government-sponsored seeding operations, and reforestation programs. Tourism, growing about 15% yearly, will narrow the balance of payments deficits that widened in 1967 after the government liberalized export policies.

STUART SCHAAR
University of Wisconsin

MOROCCO • Information Highlights

EUROPE
ASIA
AFRICA

Area: 171,834 square miles (445,050 sq km).

Population: 13,882,000 (July 1, 1966 est.).

Chief Cities (1965 est.): Rabat, the capital, 355,000; Casablanca, 1,085,000; Marrakech, 255,000; Fez, 235,000.

Government: *King*—Hassan II (acceded Feb. 26, 1961); *Premier*—Mohammed Benhima (took office July 6, 1967). *Parliament*—Chamber of Councillors, 120 members; House of Representatives (2d house), 144 members.

Religious Faiths: Muslims, 95% of population.

Education: *Literacy rate* (1960), 14% of population aged 15 and over. *Total school enrollment* (1964)—1,289,079 (primary, 1,105,182; secondary, 153,431; teacher-training, 1,278; technical, 19,052; higher, 10,136).

Finance (1966 est.): *Revenues,* $426,000,000; *expenditures,* $444,000,000; *monetary unit,* dirham (5.06 dirhams=U. S$1).

Gross National Product (1965): $2,605,000,000.

National Income (1965): $2,324,000,000; average annual income per person, $174.

Economic Indexes (1966): *Mining production,* 121 (1958=100); *agricultural production* (1965), 119 (1956–57=100); *cost of living,* 127 (1958=100).

Manufacturing: Cement; wine; gasoline; olive oil.

Crops (metric tons, 1966–67 crop year): Wheat, 814,000; citrus fruits, 703,000; grapes (1965), 488,000.

Minerals (metric tons, 1966): Phosphate rock (1965), 9,824,000 (ranks 3d among world producers); iron ore, 1,020,000; coal, 451,200; manganese ore (1965), 375,881; crude petroleum, 104,000; barite (1965), 103,880; lead, 78,000.

Foreign Trade (1966): *Exports,* $428,397,000 (chief exports: phosphates, $117,177,000; oranges, $39,322,000; manganese, $10,868,000); *imports,* $477,006,000 (chief imports, 1965: sugar, $73,606,000; wheat, $15,630,000; crude petroleum, $14,385,000). *Chief trading partner* (1965): France (took 46% of exports, supplied 39% of imports).

Transportation: *Roads* (1964), 32,180 miles (51,787 km); *motor vehicles* (1965), 228,327 (automobiles, 163,604); *railways* (1965), 1,110 miles (1,786 km); *merchant vessels* (1966), 12; *airline,* Royal Air Maroc.

Communications (1967): *Telephones,* 143,074; *television stations,* 7; *television sets,* 51,000; *radios* (1965), 700,000; *newspapers* (1963), 10.

MOTION PICTURES

TWENTIETH CENTURY-FOX

REX HARRISON appears with one of his friends in *Doctor Dolittle,* a lavish and expensive film for children, directed by Richard Fleischer and released in late 1967.

MOTION PICTURES

The year 1967 was one of tension and expansion in United States film making, with few outstanding pictures but many big plans. Television began to demand more new feature films as the backlog of earlier productions for sale to TV finally gave out. The growing number of suburban theaters added to the demand for new films. In 1967, too, the American Film Institute came into being, promising to develop new talent that might bring higher quality to motion picture production in the United States.

Most of the major companies seemed to be settling down financially. The demand for more new films stimulated expansion and corporate changes.

The American Film Institute. The need for quality was less urgently felt, perhaps, than the need for quantity, at least from the commercial standpoint. But years of academic and critical protest against the total dominance of commerce in this field of art finally stimulated a surprising show of cooperation among three normally incompatible forces—the federal government, a major foundation, and the Motion Picture Association of America, representing the commercial film producers and distributors.

The formation of the American Film Institute, announced on June 5 by President Johnson, indicated that the United States was prepared at last to follow the lead of many European countries in giving official aid to the film arts. The American Film Institute, a private nonprofit corporation based in Washington, D. C., will attempt to focus attention and effort on the art of the film in America. It will aid in the preservation and cataloging of films, in educating students and the general public about the motion picture, in training future directors, and in the actual production of films. Roger L. Stevens, chairman of the National Council on the Arts, was responsible for preliminary planning.

In 1967, gifts of $1,300,000 from each of three sources—the National Endowment for the Arts, the Ford Foundation, and the Motion Picture Association—plus another $1,300,000 to be secured from corporate and other sources, gave the AFI a three-year budget of $5,200,000. The first tasks of the new agency include giving support to existing archive agencies and film schools, and establishing a special academy or advanced study center for promising film makers. Board members include the actors Gregory Peck and Sidney Poitier; Fred Zinnemann and George Seaton, directors; Arthur Knight and Arthur Schlesinger, Jr., critics; John Culkin, educator; Arnold Picker, vice president of United Artists; and Jack Valenti, president of the MPA.

George Stevens, Jr., director of the motion picture service of the U. S. Information Agency (USIA), was appointed the first director of the American Film Institute. His job at USIA was taken over by

PICTORIAL PARADE

COOL HAND LUKE, directed by Stuart Rosenberg, starred Paul Newman (*center*) as a prison-camp convict who tries not to submit to the system or to break under pressure.

PICTORIAL PARADE

IN THE HEAT OF THE NIGHT, by Norman Jewison, gave strong dramatic roles to Sidney Poitier (*left*) and Rod Steiger.

Bruce Herschensohn, a Los Angeles documentary film maker. One of Stevens' first proposals was a revolutionary program of low-budget art films to be made by major Hollywood companies and financed in part by the AFI.

Notable U. S. Releases. It was a year of second-rank activity by American directors.

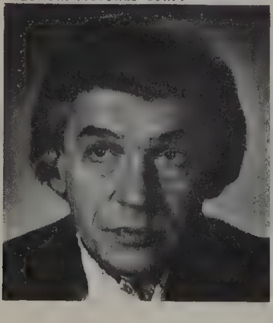
Orson Welles patched together elements from various Shakespearean plays to create *Falstaff,* in which he played the title role. Joseph Mankiewicz reworked the story of *Volpone* in a modern guise and called it *The Honey Pot.* Joshua Logan directed a lavish version of the stage musical *Camelot.* Stanley Donen brought an experimental touch, ranging back and forth in time, to *Two for the Road,* a picture about a marriage strained to the breaking point. Stanley Kramer undertook another of his problem films, this time about the prospect of a Negro-white marriage, in *Guess Who's Coming to Dinner.* Charlie Chaplin emerged from his European hideout to direct Sophia Loren and Marlon Brando in an old-style comedy of his own fashioning, *The Countess from Hong Kong.*

Among the newer, post-television directors, Norman Jewison gave race relations a suspense twist in a well-made detective story, *In the Heat of the Night,* which was the New York Film Critics choice for best picture of the year. Robert Mulligan created a characterful comedy about school teaching from the scattered bits and pieces of the novel *Up the Down Staircase,* thanks to a gentle script by Tad Mosel. Irvin Kershner rammed home a simple tale of backwoods foolery called *The Flim-Flam Man* with the wildest automobile chase on film since the Keystone Kops. Stuart Rosenberg provided Paul Newman with one of his best roles in *Cool Hand Luke,* a story of convict life.

Other notable productions by Americans came from unexpected quarters. *Thoroughly Modern Millie,* a sprightly musical about the 1920's, sprang from the production hopper of Ross Hunter, heretofore concerned mainly with remakes of old romances. Joseph Strick, after experiments with semi-documentaries like *The Savage Eye,* realized a lifelong ambition by completing a film version of *Ulysses.* James Joyce was further served by Mary Ellen Bute's motion picture based on his *Finnegan's Wake.*

In the founding year of the American Film Institute, two films stood as clear evidence that talent

COLUMBIA PICTURES CORP.



PAUL SCOFIELD received the best actor award for 1966 from the Academy of Motion Picture Arts and Sciences for his brilliant portrayal of Sir Thomas More in the film version of Robert Bolt's drama *A Man for All Seasons.* In 1962 he was given the Antoinette Perry (Tony) Award for performing the same role in the original play on the New York stage.

Scofield, the son of a village schoolmaster, was born at Hurstpierpoint, Sussex, England, on Jan. 21, 1922. He attended Varndean School for Boys in Bristol and studied dramatics at the Croydon Repertory Theatre School and at the Mask Theatre School in London. He began his acting career in the early 1940's and first attracted wide attention at the Shakespeare Festival at Stratford-on-Avon in 1946. Since then he has appeared in a wide variety of roles on the British stage. His interpretation of *Hamlet,* which he presented on a tour of England and at the Moscow Art Theatre in 1955, is considered one of the finest ever made. He has also appeared in classical roles on television.

SANDY DENNIS played a much-harassed teacher in Robert Mulligan's *Up the Down Staircase,* shot on location in a New York City school.

PICTORIAL PARADE

is worth the cost of training. *You're a Big Boy Now,* a funny-sad story about the conflict between generations, was directed by Francis Ford Coppola, not long out of UCLA's film department. And the outstanding American achievement in documentary films was *A Time for Burning.* This remarkable hour-long record of an attempt at better race relations in Lutheran churches in Omaha was produced and directed by William Jersey, a 1958 graduate in cinema from the University of Southern California.

The most talked-about American production of the year was a crisp little crime picture called *Bonnie and Clyde.* The attention it got emphasized the shortage of first-rate films in 1967. Originally prepared by its screenwriters (Robert Benton and David Newman) for the eyes of a French director (François Truffaut), this elaboration of the actual sordid exploits of Clyde Barrow and his girl friend was finally launched in the United States by Warren Beatty, who took the title role. Arthur Penn directed with free-wheeling humor and youthful abandon, allowing the two principal characters to show how exciting and attractive a life of crime can seem—at first—and then how fretful, desperately fearful, and desperately dull it really is. *Bonnie and Clyde* was full of the flavor of the 1930's, using techniques of the 1960's—a story about uninteresting people that nevertheless provoked unflagging interest.

Films for Young People. Because surveys continued to show a sharp drop in movie attendance after the age of 29, American producers vied with each other to make films based on youthful fads and thrill-seeking. After the success in 1966 of a deadpan horror story about motorcycle gangs, *The Wild Angels,* American-International hastened to make and distribute *Devil's Angels, The Glory Stompers,* and *Hell's Angels on Wheels.*

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ARTHUR PENN'S *Bonnie and Clyde,* with Warren Beatty and Faye Dunaway, became the international success of the year.

In his second year as president of the Motion Picture Association, Jack Valenti found it necessary to warn producers against excessive violence and sadism in films directed at young people: "Quality doesn't mean blatant sex, or obscene snarls at authority." One Kansas City exhibitor, Richard Durwood, suggested that the new "telephone booth theaters" of 200 to 400 seats each were ideal for family attendance. Adults, he said, can go to a picture "suggested for mature audiences" (under the MPA's new classification system) while the children go to a family film next door.

ELIZABETH TAYLOR won the Oscar award of the Academy of Motion Picture Arts and Sciences as best actress for 1966 for her performance as Martha in the screen adaptation of Edward Albee's drama *Who's Afraid of Virginia Woolf?,* co-starring her husband, Richard Burton. Previously, Miss Taylor had won an Academy Award for her performance in *Butterfield 8* (1960). Among her recent films are *The Taming of the Shrew* and *Reflections in a Golden Eye.*

Miss Taylor was born in London, England, on Feb. 27, 1932, and received her early education at Byron House and the Hawthorne School. She went to the United States after the outbreak of World War II and made her film debut as a child actress in *Lassie Come Home* (1942). Her other films include *National Velvet* (1944), *Life With Father* (1947), *Little Women* (1949), *Father of the Bride* (1950), *A Place in the Sun* (1951), *Ivanhoe* (1953), *The Last Time I Saw Paris* (1954), and *Cleopatra* (1963). Her marriage to Richard Burton in 1964 was her fifth. She has three children by earlier marriages.

GILLOON

NOTABLE MOTION PICTURES OF 1967

The following list of films released in 1967 presents a cross section of the most popular, most typical, or most widely discussed motion pictures of the year.

Accident (Cinema V). Producer-director, Joseph Losey; screenplay, Harold Pinter. With Dirk Bogarde, Stanley Baker, Jacqueline Sassard, Michael York.

Barefoot in the Park (Paramount). Producers, Hal Wallis and Paul Nathan; director, Gene Saks; screenplay, Neil Simon; adapted from his Broadway play. With Robert Redford, Jane Fonda, Charles Boyer, Mildred Natwick.

The Battle of Algiers (Rizzoli). Producer, Antonio Musu; director, Gillo Pontecorvo; screenplay, Gillo Pontecorvo and Franco Solinas. With Yacef Saadi, Jean Martin, Brahim Haggiag.

Beach Red (United Artists). Producer-director, Cornel Wilde; screenplay, Clint Johnston, Donald A. Peters, and Jefferson Pascal; based on the novel by Peter Bowman. With Cornel Wilde, Jean Wallace, Rip Torn.

The Birds, the Bees and the Italians (Seven Arts). Producers, Robert Haggiag and Pietro Germi; director, Pietro Germi; screenplay, Age, Scarpelli, Luciano Vincenzoni, and Pietro Germi. With Virni Lisi, Gastone Moschin, Olga Villi, Franco Fabrizi.

Bonnie and Clyde (Warner Brothers-Seven Arts). Producer, Warren Beatty; director, Arthur Penn; screenplay adapted from a story by David Newman and Robert Benton. With Warren Beatty, Faye Dunaway, Michael J. Pollard, Gene Hackman, Estelle Parsons.

Boudu Saved From Drowning (Pathe Contemporary). Producers, Michel Simon and Jean Gehret; director, Jean Renoir; screen play, Jean Renoir. With Michel Simon, Charles Granval, Marcelle Hainia, and Severine Lerczynska.

The Bubble (Arch Oboler). Producer-director-screenplay, Arch Oboler. With Michael Cole, Deborah Walley, Johnny Desmond.

The Burmese Harp (Brandon Films). Producer, Masayuki Takagi; director, Kon Ichikawa; screenplay, Natto Wada; based on the story by Michio Takeyama. With Rentaro Mikuni, Shoji Yasui, Tatsuya Mihashi.

Camelot (Warner Brothers-Seven Arts). Producer, Jack L. Warner; director, Joshua Logan; screenplay, Alan Jay Lerner; adapted from the musical by Alan Jay Lerner and Frederick Loewe, based on T. H. White's novel *The Once and Future King.* With Richard Harris, Vanessa Redgrave, Franco Nero, David Hemmings.

Caprice (20th Century-Fox). Producers, Aaron Rosenberg and Martin Melcher; director, Frank Tashlin; screenplay, Jay and Frank Tashlin. With Doris Day, Richard Harris, Ray Walston.

Casino Royale (Columbia). Producers, Charles K. Feldman and Jerry Bresler; directors, John Huston, Ken Hughes, Val Guest, Robert Parrish, and Joe McGrath; based on the novel by Ian Fleming. With Peter Sellers, Ursula Andress, Joanna Pettet.

Chappaqua (Regional Film [Universal]). Producer-director-screenplay, Conrad Rooks. With Conrad Rooks, Jean-Louis Barrault, William S. Burroughs, Paula Pritchett, Allen Ginsberg.

Closely Watched Trains (Sigma III). Producer-director, Jiri Menzel; screenplay, Jim Menzel and Bohumil Hrabal. With Vaclav Neckar and Jitka Bendova.

The Comedians (M-G-M). Producer-director, Peter Glenville; screenplay, Graham Greene; adapted from his novel. With Richard Burton, Elizabeth Taylor, Alec Guinness, Peter Ustinov, Paul Ford, Lillian Gish.

Cool Hand Luke (Warner Brothers). Producer, Gordon Carrol; director, Stuart Rosenberg; screenplay, Frank R. Pierson and Donn Pearce; based on a novel by Donn Pearce. With Paul Newman, George Kennedy, J. D. Cannon, Lou Antonio.

A Countess From Hong Kong (Universal). Director-writer, Charlie Chaplin. With Sophia Loren, Marlon Brando, Sydney Chaplin, Tippi Hedren.

The Day the Fish Came Out (International Classics). Producer-director-screenplay, Michael Cacoyannis. With Tom Courtenay, Sam Wanamaker, Colin Blakely, Candice Bergen.

The Deadly Affair (Columbia). Producer-director, Sidney Lumet; screenplay, Paul Dehn; adapted from John Le Carre's *Call for the Dead.* With James Mason, Simone Signoret, Maximilian Schell, Harriet Andersson.

Le Depart (Elisabeth Films). Director, Jerzy Skolimowski; screenplay, Jerzy Skolimowski and Andrzej Kostenko. With Jean-Pierre Leaud, Catherine Duport, Jacqueline Bir, Paul Roland.

Devil's Angels (American International). Producer, Burt Topper; director, Daniel Haller; screenplay, Charles B. Griffith. With John Cassavetes, Beverly Adams, Mimsy Former.

The Dirty Dozen (M-G-M). Producer, Kenneth Hyman; director, Robert Aldrich; screenplay, Nunnally Johnson and Lukas Heller; from the book by E. M. Nathanson. With Lee Marvin, Ernest Borgnine, Charles Bronson, Jim Brown, John Cassavetes.

Divorce American Style (Columbia). Producer, Norman Lear; director, Bud Yorkin; screenplay, Norman Lear; from a story by Robert Kaufman. With Dick Van Dyke, Debbie Reynolds, Jason Robards, Jean Simmons, Van Johnson.

Doctor Dolittle (20th Century-Fox). Producer, Arthur P. Jacobs; director, Richard Fleischer; screenplay, music, and lyrics, Leslie Bricusse. With Rex Harrison, Samantha Eggar.

Don't Look Back (Leacock-Pennebaker). Producer-director, D. A. Pennebaker. A documentary on the folk singer Bob Dylan.

Dutchman (Gene Persson Enterprises). Director, Anthony Harvey; adapted from the play by LeRoi Jones. With Shirley Knight, Al Freeman, Jr.

Elvira Madigan (Cinema V). Director-screenplay, Bo Widerberg. With Pia Degermark, Thommy Berggren, Lennart Malmen, Nina Widerberg, Cleo Jensen.

Enter Laughing (Columbia). Producers-directors, Carl Reiner and Joseph Stein; screenplay, Carl Reiner and Joseph Stein; adapted from the play by Joseph Stein. With Jose Ferrer, Shelley Winters, Elaine May, Jack Gilford, Janet Margolin.

The Exterminating Angel (Altura Films). Director, Luis Bunuel. With Silvia Pinal, Jacqueline Andere, Jose Baviera, Luis Beristain.

Falstaff (also titled **Chimes at Midnight**) (Peppercorn-Wormser). Producers, Emilio Piedra and Angel Escolano; director and screenplay, Orson Welles; adapted from Shakespeare's *Henry IV* and *Henry V.* With Orson Welles, Jeanne Moreau, John Gielgud, Margaret Rutherford.

The Family Way (Warner Brothers). Producers-directors, John and Roy Boulting; screenplay, Bill Naughton, Roy Boulting and Jeffrey Dell; based on the play *All in Good Time* by Bill Naughton. With Hayley Mills, John Mills, Hywel Bennett, Marjorie Rhodes.

Far From the Madding Crowd (M-G-M). Producer, Joseph Janni; director, John Schlesinger; screenplay, Frederic Raphael; adapted from the novel by Thomas Hardy. With Julie Christie, Terence Stamp, Peter Finch, Alan Bates.

Father (Continental). Director-sceenplay, Istvan Szabo. With Miklos Gabor, Klari Tolnay, Andras Balint, Dani Erdelyi.

The Fearless Vampire Killers (or **Pardon Me, but Your Teeth are in My Neck**) (M-G-M). Producers, Roman Polanski and Martin Ransohoff; director, Roman Polanski; screenplay, Roman Polanski and Gerard Brach. With Jack MacGowran, Sharon Tate, Alfie Bass, Roman Polanski.

Festival (Peppercorn-Wormser). Producer-director, Murray Lerner. With Joan Baez, Bob Dylan, Peter, Paul and Mary, Johnny Cash, Donovan, Judy Collins, Odetta.

Finnegans Wake (Grove Press). Producer-director, Mary Ellen Bute; screenplay, Mary Manning; adapted from the novel by James Joyce. With Martin J. Kelley, Jane Reilly, Peter Haskell, Page Johnson.

The Flim-Flam Man (20th Century-Fox). Producer, Lawrence Turman; director, Irvin Kershner; screenplay, William Rose; based on the novel by Guy Owen. With George C. Scott, Sue Lyon, Michael Sarrazin, Harry Morgan.

For a Few Dollars More (United Artists). Producer, Alberto Grimaldi; director, Sergio Leone; screenplay, Luciano Vincenzoni. With Clint Eastwood, Lee Van Cleef, Gian Maria Volonte, Mara Krup, Luigi Pistilli, Klaus Kinski, Mario Brega.

The Game is Over (Royal Films International). Producers, Marceau-Cocinor; director, Roger Vadim; screenplay, Roger Vadim, Jean Cau, Bernard Frechtman; based on Emile Zola's novel *La Curée.* With Jane Fonda, Peter McEnery, Michel Piccoli.

Games (Universal). Producer, George Edwards; director, Curtis Harrington; screenplay, Gene Kearney; based on an original story by Curtis Harrington. With Simone Signoret, James Caan, Katharine Ross, Don Stroud, Kent Smith.

The Graduate (Embassy). Produced by Lawrence Turman, presented by Joseph E. Levine; screenplay by Calder Willingham and Buck Henry, based on a novel by Charles Webb; directed by Mike Nichols. With Anne Bancroft, Dustin Hoffman, Katharine Ross, William Daniels, Murray Hamilton.

La Guerre est Finie (Brandon Films). Produced by Sofracima of Paris and Europa-Film of Stockholm. Screenplay by Jorge Semprun, directed by Alain Resnais. With Yves Montand, Ingrid Thulin, Genevieve Bujold, Dominique Rozan, Juan-Francois Remi.

Guess Who's Coming to Dinner (Columbia). Producer-director, Stanley Kramer; screenplay, William Rose. With Spencer Tracy, Sidney Poitier, Katharine Hepburn, Katharine Houghton.

A Guide for the Married Man (20th Century-Fox). Producer, Frank McCarthy; director, Gene Kelly; screenplay, Frank Tarloff. With Walter Matthau, Inger Stevens, Sue Ane Langdon, Robert Morse.

The Happening (Columbia). Producer, Judd Kinberg; director Elliott Silverstein; screenplay, Frank R. Pierson, James D. Buchanan and Ronald Austin. With Anthony Quinn, Faye Dunaway, Michael Parks, George Maharis, Robert Walker, Martha Hyer.

The Happiest Millionaire (Buena Vista). Producer,Walt Disney; director, Norman Tokar; screenplay, Richard M. and Robert B. Sherman; based on the biography and play by Cornelia Drexel Biddle and Kyle Crichton. With Fred MacMurray, Tommy Steele, Greer Garson, John Davidson, Geraldine Page.

The Hawks and the Sparrows (Brandon). Producer, Alfredo Bini; director and screenplay, Pier Paolo Pasolini. With Toto, Ninetto Davoli, Femi Benussi, Umberto Bevilacqua.

Hombre (20th Century-Fox). Producer-director, Martin Ritt; screenplay, Irving Ravetch and Harriet Frank. With Paul Newman, Frederic March, Richard Boone, Diane Cilento, Cameron Mitchell.

The Honey Pot (United Artists). Producer, Charles K. Feldman; director-screenplay, Joseph L. Mankiewicz; based partly on Ben Jonson's *Volpone.* With Rex Harrison, Susan Hayward, Cliff Robertson, Edie Adams, Capucine.

Hotel (Warner Brothers) . Producer, Wendell Mayes; director, Richard Quine; screenplay, Wendell Mayes; from a novel by Arthur Hailey. With Rod Taylor, Catherine Spaak, Karl Malden, Merle Oberon, Melvyn Douglas, Richard Conte.

How to Succeed in Business Without Really Trying (United Artists). Producer-director, David Swift; adapted from the musical play with lyrics and music by Frank Loesser. With Robert Morse, Michele Lee, Rudy Vallee.

The Hunt (Trans-Lux). Producer, Elias Querejetz; director-screenplay, Carlos Saura. With Ismael Merlo, Alfredo Mayo, Jose Maria Prada, Emilio Gutierrez Caba.

Hurry Sundown (Paramount). Producer-director Otto Preminger; screenplay, Horton Foote and Thomas C. Ryan; from the novel by K. B. Gilden. With Michael Caine, Jane Fonda, John Philip Low, Diahann Carroll.

In Cold Blood (Columbia). Producer-director and screenplay, Richard Brooks; based on Truman Capote's novel. With John Forsythe, Paul Stewart, Robert Blake, Scott Wilson.

In the Heat of the Night (United Artists). Producers, Walter Mirisch and Norman Jewison; director, Norman Jewison; screenplay, Stirling Silliphant; based on the novel by John Ball. With Sidney Poitier, Rod Steiger, Warren Oates, Lee Grant.

The Jokers (Universal). Producers, Maurice Foster and Ben Arbeid; director and screenplay, Michael Winner. With Michael Crawford, Oliver Reed, Harry Andrews, James Donald.

The Jungle Book (Buena Vista). Producer, Walt Disney; director, Wolfgang Reitherman. Animated feature based on the Rudyard Kipling book. With the voices of Phil Harris, Sebastian Cabot, Louis Prima, Sterling Holloway, J. Pat O'Malley.

King of Hearts (Lopert). Director, Philippe De Broca; screenplay, Daniel Boulanger. With Alan Bates, Jean-Claude Brialy, Pierre Brasseur, Genevieve Bujold.

Luv (Columbia). Producers, Martin Manulis and Gordon Carroll; director, Clive Donner; screenplay, Elliot Baker; adapted from the play by Murray Schisgal. With Jack Lemmon, Peter Falk, Elaine May, Nina Wayne.

Monkeys, Go Home! (Buena Vista). Producer, Walt Disney; director, Andrew V. McLaglen; screenplay, Maurice Tombragel; based on the book by G. K. Wilkinson. With Maurice Chevalier, Dean Jones, Yvette Mimieux.

More Than a Miracle (M-G-M). Producer, Carlo Ponti; director, Francesco Rosi; screenplay, Francesco Rosi, Tonino Guerra, Raffaele La Capria, Peppino Patroni; from a story by Tonino Guerra. With Sophia Loren, Omar Sharif, George Wilson, Leslie French, Dolores Del Rio.

My Sister, My Love (Swedish title, **Syskonbadd 1782**) (Sigma III). Producer, Sandrew Films; written and directed by Vilgot Sjoman. With Bibi Andersson, Per Oscarsson, Jarl Kulle, Gunnar Bjornstrand.

The Night of the Generals (Columbia). Producer, Sam Spiegel; director, Anatole Litvak; screenplay, Joseph Kessel and Paul Dean; adapted from the novel by Hans Hellmut Kirst. With Peter O'Toole, Omar Sharif, Tom Courtenay, Joanna Pettet, Donald Pleasence.

Oh Dad, Poor Dad, Mamma's Hung You in the Closet and I'm Feeling So Sad (Paramount). Producers, Ray Stark and Stanley Rubin; director, Richard Quine; from the off-Broadway play by Arthur L. Kopit. With Rosalind Russell, Robert Morse, Barbara Harris, Hugh Griffith, Jonathan Winters.

Our Mother's House. (M-G-M). Producer-director, Jack Clayton; screenplay, Jeremy Brooks and Haya Harareet; adapted from a story by Julian Gloag. With Dirk Bogarde, Margaret Brooks, Louis Sheldon-Williams, John Gugolka, Pamela Franklin.

The Persecution and Assassination of Jean-Paul Marat as Performed by the Inmates of the Asylum of Charenton Under the Direction of the Marquis de Sade (United Artists). Director, Peter Brook; adapted from the play of Peter Weiss. With Clifford Rose, Glenda Jackson, Ian Richardson, Patrick Magee, Brenda Kempner.

Persona (Lopert). Director and screenplay, Ingmar Bergman. With Bibi Andersson, Liv Ullmann, Margaretha Krook, Gunnar Bjornstrand.

Point Blank (M-G-M). Producers, Judd Bernard and Robert Chartoff; director, John Boorman; screenplay, Alexander Jacobs, David and Rafe Newhouse. With Lee Marvin, Angie Dickinson, Keenan Wynn, Carroll O'Conner, Lloyd Bochner.

Portrait of Jason (Film-Makers Distribution Center). Producer-director-editor, Shirley Clarke. With Jason Holliday. A documentary interview with a male prostitute.

Privilege (Universal). Producer, John Heyman; director, Peter Watkins; screenplay, Norman Bogner. With Paul Jones, Jean Shrimpton, Mark London, Max Bacon.

Raven's End (Europa Films). Director-screenplay, Bo Widerberg. With Thommy Berggren, Keve Hjelm, Emy Strom, Ingvar Hirdwall, Christina Fromback.

Reflections in a Golden Eye (Warner Brothers-Seven Arts). Producers, John Huston and Ray Stark; director, John Huston; screenplay, Chapman Mortimer and Gladys Hill; adapted from the novel by Carson McCullers. With Elizabeth Taylor, Marlon Brando, Brian Keith, Julie Harris.

Robbery (Embassy). Producers, Stanley Baker, Michael Deeley, Joanna Pettet and James Booth; director, Peter Yates; screenplay, Edward Boyd. With Stanley Baker, Joanna Pettet, James Booth, Frank Finlay, Barry Foster, William Marlowe.

Rush to Judgment (Impact Films). Producers, Emile de Antonio and Mark Lane; director, Emile de Antonio; screenplay, Mark Lane. Documentary adapted from the book that questioned the official inquiry into President Kennedy's assassination.

She and He (Brandon Films). Director-writer, Susumu Hani. With Sachiko Hidari, Kikuji Yamashita, Eiji Okada.

Sweet Love, Bitter (Film 2 Associates). Producer, Lewis Jacobs; directors and screenplay, Herbert Danska and Lewis Jacobs; from the book *Night Song* by John Williams. With Dick Gregory, Don Murray, Diane Varsi.

The Taming of the Shrew (Royal Films [Columbia]). Producers, Richard Burton and Franco Zeffirelli; director, Franco Zeffirelli; screenplay by Richard Burton and Franco Zeffirelli based on the play by Shakespeare. With Elizabeth Taylor, Richard Burton, Cyril Cusack, Michael Hordern.

Thoroughly Modern Millie (Universal). Producer, Ross Hunter; director, George Roy Hill; screenplay, Richard Morris. With Julie Andrews, James Fox, Mary Tyler Moore, Carol Channing, Beatrice Lillie, John Gavin.

The Tiger Makes Out (Columbia). Producer, George Justin; director, Arthur Hiller; screenplay, Murray Schisgal; adapted from his short play *The Tiger*. With Eli Wallach, Anne Jackson, Bob Dishy, John Harkins, Ruth White.

The Titicut Follies (Titicut Follies Distributing Company [Grove Press]). Producer-director-editor, Frederick Wiseman. Documentary about a Massachusetts insane asylum.

To Sir, With Love (Columbia). Producer-director-screenplay, James Clavell. With Sidney Poitier, Judy Geeson, Suzy Kendall, "Lulu," Ann Bell, Faith Brook, Christopher Chittel.

Tobruk (Universal). Producer, Gene Corman; director, Arthur Hiller; screenplay, Leo V. Gordon. With Rock Hudson, George Peppard, Guy Stockwell, Nigel Green.

Tony Rome (20th Century-Fox). Producer, Aaron Rosenberg; director, Gordon Douglas; screenplay, Richard Breen. With Frank Sinatra, Jill St. John, Richard Conte, Gena Rowlands.

The Trip (American International). Producer-director, Roger Corman; screenplay, Jack Nicholson. With Peter Fonda, Susan Strasberg, Bruce Dern, Dennis Hopper.

The Twenty-fifth Hour (M-G-M). Producer, Carlo Ponti; director, Henry Verneuil; screenplay, Henry Verneuil, Francoise Boyer, Wolf Mankowitz. With Anthony Quinn, Virni Lisi, Michael Redgrave, Gregoire Aslan.

Two for the Road (20th Century-Fox). Producer-director, Stanley Donen; screenplay, Frederic Raphael. With Audrey Hepburn, Albert Finney, Eleanor Bron, William Daniels.

Ulysses (Continental). Producer-director, Joseph Strick; screenplay, Joseph Strick and Fred Haines; adapted from the novel by James Joyce. With Milo O'Shea, Barbara Jefford, Maurice Roeves, T. P. McKenna, Anna Manahan, Sheila O'Sullivan.

Up the Down Staircase (Warner Brothers). Producers, Alan Pakula and Robert Mulligan; director, Robert Mulligan; screenplay, Tad Mosel; adapted from the novel by Bel Kaufman. With Sandy Dennis, Patrick Bedford, Eileen Heckart, Ruth White, Jean Stapleton.

The Venetian Affair (M-G-M). Producers, Jerry Thorpe and E. Jack Neuman; director, Jerry Thorpe; screenplay, E. Jack Neuman; from Helen MacInnes' novel *Venetian Affair*. With Robert Vaughn, Elke Sommer, Felicia Farr, Karl Boehm, Boris Karloff.

Wait Until Dark (Warner Brothers-Seven Arts). Producer, Mel Ferrer; director, Terence Young; screenplay, Robert and Jane-Howard Carrington; adapted from the Broadway drama by Frederick Knott. With Audrey Hepburn, Richard Crenna, Alan Arkin, Jack Weston.

The War Game (Pathe Contemporary). Director-writer, Peter Watkins. An enacted documentary about a future nuclear war.

The Way West (United Artists). Producer, Harold Hecht; director, Andrew V. McLaglen; screenplay, Ben Maddow and Mitch Lindemann; from the novel by A. B. Guthrie, Jr. With Kirk Douglas, Robert Mitchum, Richard Widmark, Lola Albright.

Welcome to Hard Times (M-G-M). Director and screenplay, Burt Kennedy. With Henry Fonda, Janice Rule, Keenan Wynn, Aldo Ray.

The Whisperers (Lopert). Producer-director-screenplay, Bryan Forbes; based on the novel by Robert Nicholson. With Edith Evans, Eric Portman, Nanette Newman, Ronald Fraser.

Who's Minding the Mint? (Columbia). Producer, Norman Maurer; director, Howard Morris; screenplay, R. S. Allen and Harvey Bullock. With Jim Hutton, Dorothy Provine, Milton Berle, Joey Bishop.

Woman Times Seven (Embassy). Producer, Arthur Cohn; director, Vittorio de Sica; screenplay, Cesare Zavattini. With Shirley MacLaine, Anita Ekberg, Elsa Martinelli, Adrienne Corri, Peter Sellers, Michael Caine, Rossano Brazzi.

Yo Yo (Magna). Producer-director-screenplay, Pierre Etaix. With Pierre Etaix, Phillippe Dionnet, Luce Klein, Claudine Anger.

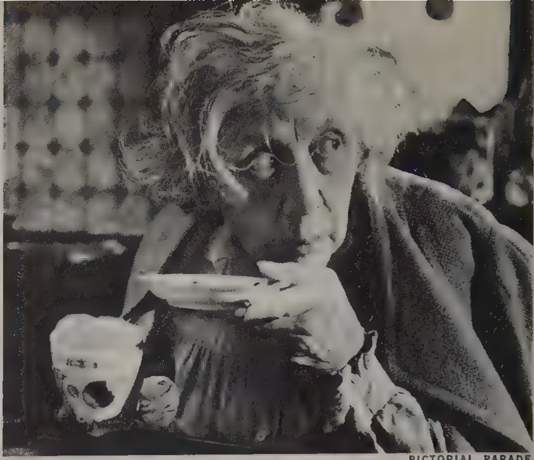
You Only Live Twice (United Artists). Producers, Albert R. Broccoli and Harry Saltzman; directors, Lewis Gilbert and Peter Hall; screenplay, Roald Dahl; based on the novel by Ian Fleming. With Sean Connery, Donald Pleasence, Karin Dor, Lois Maxwell.

Young Americans (Columbia). Producer, Robert Cohn; director-screenplay, Alex Grasshoff. With Milton C. Anderson and "The Young Americans." A semi-documentary based on a national tour of this Southern California singing group.

Young Aphrodites (Janus Films). Producers, Nikos Koundouros and George Zervos; director, Nikos Koundouros; screenplay, Vassilis Vassilikos and Costas Sphikas. With Takis Emmanouel, Eleni Prokopiou, Vangelis Joannides, Cleopatra Rota.

You're a Big Boy Now (Seven Arts). Producer, Phil Feldman; director and screenplay, Francis Ford Coppola. With Elizabeth Hartman, Geraldine Page, Julie Harris, Peter Kastner Rip Torn, Tony Bill, Karen Black.

UNIVERSAL STUDIO



PICTORIAL PARADE

DAME EDITH EVANS won high critical praise for her performance in Bryan Forbes' *The Whisperers,* a British film about an old woman living out her life in the welfare state.

JULIE ANDREWS, Carol Channing, and Mary Tyler Moore are the three girls with the biplane in George Roy Hill's *Thoroughly Modern Millie,* a musical look back to the 1920's.

In 1967, children could see such "family films" as *Monkeys Go Home, The Reluctant Astronaut, Enter Laughing, The Happiest Millionaire,* a Disney animated version of *The Jungle Book,* and a major studio production of *Dr. Dolittle,* starring Rex Harrison.

It was up to the theater owner, however, to decide whether to turn down the money offered by youthful cinema-goers for such "exploitation pictures" as *Africa Addio,* which included a mound of human hands cut from living Watusi, or *Sadismo,* advertised as "an authentic catalog of cruelty."

Adolescents were more likely to be found at reenactments of real crimes like *The St. Valentine's Day Massacre* and *In Cold Blood* or at action pictures like *Point Blank,* with its cinematic twists on an old revenge theme. *Hombre* had an Indian as its anti-hero. *Waterhole No. 3* tried to be slapstick-funny like *Cat Ballou.* From Italy came a long list of "westerns" in which corpses outnumbered horses.

KATHERINE ROSS screams at the climax of Mike Nichols' *The Graduate,* a dark comedy about the pains of loving and growing up in the suburbs of affluent America in the 1960's.

PICTORIAL PARADE

Underground Films and Student Productions. The so-called underground film makers, mostly located in New York City, attracted attention with low-budget films using consciously primitive techniques, unorthodox attitudes, and erotic subjects. Leading figures were Ed Emshwiller, Stan Brakhage, Andy Warhol, and the editor of *Film Culture,* Jonas Mekas. Few of the established group were especially young, but they claimed to speak for the unsettled feelings of a disaffected generation.

More representative, perhaps, of younger film makers were the increasing numbers of college students in film history and film production classes. Student productions were solicited for annual awards sponsored by the MPA and the National Student Association.

Documentaries. In addition to *A Time for Burning,* documentary films ranged from sports pictures like *Ski on the Wild Side* to a reenactment of *The Battle of Algiers. Rush to Judgment* questioned the Warren Commission's report on the Kennedy assassination. *The Titicut Follies* recorded the degrading treatment of inmates in a Massachusetts insane asylum. *The War Game,* which won an Academy Award, was widely shown on college campuses: it enacted the imagined future chaos and torture of an atomic attack on England.

Foreign Films. The "new wave" from abroad in 1967 was Czechoslovakian. Following the critical and popular success of the Academy Award winner, *The Shop on Main Street,* there appeared in quick succession *Loves of a Blonde, Daisies, Do You Keep a Lion at Home?* and *Lemonade Joe,* an elaborate spoof of westerns. *Closely Watched Trains,* a wartime tragedy, was particularly admired for its skillful mixture of realism, comedy, and poetic feeling.

From Hungary, the latest of the eastern European countries to excel in film production, came *Age*

PICTORIAL PARADE

ROBERT BLAKE AND SCOTT WILSON (*right*), relatively unknown actors, starred as the killers in Richard Brooks' screen adaptation of Truman Capote's *In Cold Blood.*

TWO FOR THE ROAD, by Stanley Donen, presented Albert Finney and Audrey Hepburn as partners in a modern marriage that does not quite fail during ten stormy years.

PICTORIAL PARADE

of Illusion, Dialogue, and *Father,* an affecting story of a boy's exaggerated memories; from Poland, *Le Départ,* a new film by the young director Jerzy Skolimowski; and from Spain, a major work, *The Hunt,* by another talented newcomer, Carlos Saura.

From Sweden came a new Ingmar Bergman film about the personalities of two women (*Persona*), a story about a young writer (*Raven's End*), a poetic study of star-crossed lovers (*Elvira Madigan*), and two exploitation pictures for the intellectuals (*Night Games* and *My Sister, My Love*). New English films included John Schlesinger's version of Thomas Hardy's *Far From the Madding Crowd* and another of Joseph Losey's studies of progressive deterioration, *Accident.*

France produced a new Pierre Etaix comedy, *Yo Yo,* plus pictures by Philippe de Broca, Roger Vadim, Claude Lelouch, and Jean-Luc Godard. *Boudu Saved From Drowning,* a Jean Renoir film of 1932, was at last released in the United States.

Box Office Notes. One of the most popular performers in 1967 was Sidney Poitier, who appeared in *Guess Who's Coming to Dinner* and *In the Heat of the Night. To Sir With Love,* a British production, starred Poitier as a high school teacher who wins the respect of his class. Elizabeth Taylor was seen in *Reflections in a Golden Eye,* based on the Carson McCullers novel, and with her husband, Richard Burton, in *The Comedians* and *The Taming of the Shrew.*

Spy pictures seemed to be declining somewhat in interest in 1967, although *Casino Royale* and *You Only Live Twice,* both based on stories about James Bond, continued to enrich their producers.

Gone With the Wind, re-released in a new widescreen format and with re-recorded stereophonic sound, proved its appeal to a third generation of moviegoers. M-G-M expected the film to regain its traditional first place in total box office income, from which *The Sound of Music* dislodged it last year.

New Production Companies. Warner Brothers, partially purchased in 1966 by Seven Arts Productions, was completely bought out in 1967. The new company, Warner Brothers-Seven Arts, was run by Eliot Hyman as president in New York and by his son Kenneth as production chief in Hollywood. Paramount, on the other hand, was taken over by a nonprofessional, Charles Bluhdorn, chief executive officer of Gulf and Western Industries.

The pattern established in recent years indicated that feature film production by the major studios would continue at an increasing rate to meet the growing needs of theaters and television. NBC-TV had a continuing contract with Universal to supply features, and ABC-TV had a similar deal with M-G-M. But in March the Columbia Broadcasting System announced that it was setting up a whole new program of film production—in effect, a new "major" in Hollywood. Gordon Stulberg, former vice president in charge of contracts and business affairs at Columbia Pictures, became president of the new film division at CBS.

The American Broadcasting-Paramount Theaters Corporation set up two subsidiary production companies, and arranged another elaborate program of co-financing with Cinerama Productions under its new president, Seymour Poe. National General Corporation, a chain of theaters based on the West Coast, announced that it was beginning its long-planned move into production and distribution. In Chicago, Bell and Howell, manufacturers of movie equipment, purchased the studios of Wilding, Inc., and prepared to make a dozen feature pictures in cooperation with the seasoned stage performers at Second City Productions.

Some of these new companies raised problems for the antitrust division of the Department of Justice. They might well be illegal under the precedent of the Paramount case of 1948, which separated theater chains and production-distribution companies. But in the time it would take to prosecute, a good many films could be made.

(See also PRIZES AND AWARDS.)

RICHARD DYER MACCANN
Radio-Television-Film Department
University of Kansas

MOTOR TRANSPORTATION

Truck transportation in the United States showed little change in 1967 over the high levels attained a year earlier. Bus travel rose moderately in 1967, achieving increases in intercity operations and school bus transportation and suffering slight declines in local and suburban operations.

Trucking The U.S. motor truck fleet in 1967 increased by 300,000 vehicles over the previous year. Registrations, excluding government-owned trucks, reached an all-time high of 15 million, compared with 14.7 million in 1966. The industry carried over 400 million ton-miles of freight in 1967, a small increase over the preceding year.

Total operating revenues for the 15,500 for-hire truck lines engaged in U S. interstate commerce rose to about $11.1 billion from $10.9 billion in 1966. The new high was about $1 billion above the annual freight revenues of all U. S. railroads. Private and for-hire trucking operators not regulated by the Interstate Commerce Commission earned additional billions of shipping dollars.

The trucking industry's impact on the economy was felt in several areas. In 1967 trucks used nearly 20.5 million gallons of motor fuel costing more than $5.4 billion. The industry provided employment for more than 8 million persons and had a payroll totaling approximately $55 billion.

In 1967 motor trucks paid an estimated $4.4 billion in federal and state highway use taxes, including taxes levied for construction of the Interstate Defense Highway System. This figure represents about one third of total highway taxes, although trucks account for only 15.6% of all registered motor vehicles.

Bus Operations. Intercity bus travel in 1967 increased slightly over the level for 1966—a year in which heavy bus travel was generated by an airline strike. Bus travel, according to the National Association of Motor Bus Owners, was expected to total more than 24.5 billion passenger miles in 1967, largely as a result of continued expansion in express bus service and charter party travel, as well as heavy travel to Expo 67 in Montreal, Quebec.

Travel on local and suburban bus systems continued the slight decline of the previous years, but the number of revenue passengers carried in 1967 again totaled more than 4.5 billion, according to the American Transit Association. The problems of local mass transportation systems received further attention in 1967, including grants of money under the Urban Mass Transportation Act of 1964 to help modernize fleets and terminals. Plans have been developed for rapid transit bus services, and a new type of bus is under development in a project directed by the National Academy of Sciences.

The school bus fleet in 1966 totaled about 240,000 vehicles, an increase of about 4% in a year, according to the U. S. Bureau of Public Roads. The number of pupils transported at public expense has been increasing recently at an annual rate of about 5% and is estimated to have been in excess of 16 million for the 1965–66 school year.

There were more than 323,000 busses in the United States in 1966. The fleet has been increasing recently at from 2% to 4% annually.

WILLIAM A. BRESNAHAN
American Trucking Associations, Inc.

MOTORBOAT RACING. See SPORTS.

MUSCAT AND OMAN

The sultanate of Muscat and Oman occupies almost the entire Arabian coast of the Gulf of Oman, the peninsula of Rus al-Jibal at the entrance to the Persian Gulf, the eastern half of the Arabian coast (mainly in the Dhufar region) on the Arabian Sea, and a territory of undetermined extent in the interior, to which the name "Oman" is properly applied.

Oil Production and Exploration. In July 1967, the production of oil was begun in the sultanate on completion of the 175-mile (282-km) pipeline from the interior to the new terminal of Saih al-Malih on the Gulf of Oman. The initial rate of production for export was about 140,000 barrels a day. Earlier in the year the producing company, Petroleum Development (Oman) Ltd., concluded a new agreement with the Sultan, calling for profit sharing on a 50-50 basis. The ownership of the company was altered in 1967 when Compagnie Française des Pétroles acquired two thirds of the holdings of the late C. S. Gulbenkian whose interest in an oil company in the sultanate devolved to his estate when he died. This makes the new pattern of ownership 85% for Royal Dutch Shell, 10% for CFP, and 5% for the Gulbenkian estate.

The Continental Oil Company, which in 1966 took over the interests of John W. Mecom, an independent Texas oil producer, in Dhufar, continued its exploratory activities there.

Other Developments. The withdrawal of British forces from the military base at Aden in November 1967 leaves the Persian Gulf and eastern Arabia as the last footholds of British military power in the area. Aden is being replaced as the main British base by Sharjah, one of the Trucial States on the Persian Gulf. The Royal Air Force is strengthening its position on the island of Masirah off the coast of Oman. The RAF also uses Salalah in Dhufar.

The rivalry between the imam of Oman, Ghalib ibn Ali, and the sultan, Said ibn Taymur, persisted through the year. No agreement was reached with Saudi Arabia over ownership of the Buraimi Oasis.

GEORGE RENTZ
Hoover Institution, Stanford University

MUSCAT AND OMAN • Information Highlights

EUROPE
ASIA
AFRICA

Area: 82,000 square miles (212,379 sq km).
Population: 565,000 (July 1, 1966 est.).
Chief Cities (1960 est.): Muscat, the capital, 5,080.
Government: Sultan—Said ibn Taymur (acceded 1932).
Principal Religious Faith: Islam.
Finance (annual): *Revenues*, $5,600,000; *monetary unit*, Saudi Arabian riyal (4.47 riyals equal U. S.$1).
Crops: Cereals, dates, pomegranates, limes.
Minerals: Petroleum.
Foreign Trade (1965): *Exports*, $1,300,000 (chief exports: petroleum, dates, dried limes, dried fish, and tobacco leaves); *imports*, $9,100,000 (chief imports: rice, wheat and flour, coffee, sugar, cotton piece goods, cement, vehicles, and spare parts). *Chief trading partner*, Britain.

UNITED NATIONS

WEST MEETS EAST as violinist Yehudi Menuhin plays with Indian sitarist Ravi Shankar (*left*) at a December concert in the UN General Assembly Hall, New York.

MUSIC

Expo 67 in Montreal provided a center for much of 1967's musical activity. Along with contributions in architecture, painting, motion pictures, electronically produced sound, and various combinations of all these media, many participating nations sent their opera companies and symphony orchestras to take part in World Festival, the performing arts adjunct to Expo. Performances took place at the theaters in Montreal's new Place des Arts, and there visitors from all over the world could see the gargantuan, ultrarealistic productions of the Bolshoi Opera, the contemporary, stylized work of the Stockholm Royal Opera and the Hamburg State Opera, and the traditional presentations of two of the most prestigious opera companies in the world—the Vienna State Opera and La Scala of Milan. All these companies were making their first appearances in North America, as were the Melbourne Symphony and Yehudi Menuhin's Bath (England) Festival Orchestra.

Orchestras in the United States. The directorships of several major American orchestras will become vacant in the near future. Leonard Bernstein has announced his intention of resigning from the New York Philharmonic at the close of the 1968–69 season; Erich Leinsdorf made public his intention to resign as director of the Boston Symphony Orchestra at the end of the 1969 season at Tanglewood; Jean Martinon will leave the Chicago Symphony and Eleazar de Carvalho the St. Louis Symphony at the end of the 1967–68 season. Zubin Mehta, who previously divided his time between the Los Angeles Philharmonic and the Montreal Symphony, relinquished his post in Montreal, and Franz-Paul Decker took over at the start of the 1967–68 season. In the fall of 1967, Robert Shaw left his post as associate conductor of the Cleveland Orchestra to become conductor of the Atlanta Symphony in Atlanta, Ga., where he inaugurated the new Atlanta City Auditorium. During the same period, Andre Previn succeeded Sir John Barbirolli in Houston, and there were also new conductors in Miami, Fla. (Alain Lombard, a 1966 Mitropoulos Competition winner), Honolulu (Robert LaMarchina), Louisville, Ky., (Jorge Mester), and in San Diego (Zoltan Rozsnyai).

The New York Philharmonic and Vienna Philharmonic both marked their 125th seasons in 1967–68. At a gala celebration held on October 3 by the Vienna Philharmonic in New York, Leonard Bernstein and Karl Böhm shared the conducting. On December 7, the actual birthday of the New York Philharmonic, Bernstein conducted a duplicate of the inauguration program of 1842. For the rest of the season, the Philharmonic was including in each concert at least one work of which the orchestra, during its history, gave either the world premiere or the U. S. premiere. Among these compositions are Tchaikovsky's Symphony No. 2, which had its U. S. premiere in 1883, and Charles Ives' Symphony No. 2, which had its world premiere in 1951. A number of works, including *Inscape* by Aaron Copland and the Symphony No. 4 of Roberto Gerhard, have been specially commissioned by the New York Philharmonic for the anniversary season.

In Cleveland a threatened strike by the Cleveland Symphony forced the local Lake Erie Opera Company to cancel its 1967 fall season, since it could

FRED FEHL

LE COQ D'OR by Rimsky-Korsakov received a stylish production at the New York City Opera during its fall 1967 season. Norman Treigle sang the role of the King.

not rely on the availability of the orchestra, which it uses in its productions. However, an agreement was reached in time to save the concert season. A strike by the musicians of the Chicago Lyric Opera forced Chicago to do without its opera season. Unlike the Lake Erie Opera Company, the Chicago Opera does not share its orchestra members with the symphony of its city.

In July, Washington's National Symphony opened the new Merriweather Post Pavilion of Music in Columbia, Md. The orchestra's summer series will henceforth be housed there.

Opera in the United States. While demolition workers in New York moved in on the old Metropolitan Opera House in January 1967, the company continued its first season at Lincoln Center with new productions of Benjamin Britten's *Peter Grimes,* directed by Tyrone Guthrie and conducted by England's Colin Davis, and Mozart's *Die Zauberflöte,* with dazzlingly colorful sets and costumes by the French artist Marc Chagall—overpoweringly dazzling, according to the opinion of some critics. The final important event of the season was the world premiere, on March 17, of Marvin David Levy's *Mourning Becomes Electra.* Adapted by librettist Henry Butler from Eugene O'Neill's play, and superbly acted by the sopranos Marie Collier and Evelyn Lear in the principal roles, the opera was unfortunately marred by its ineffective music.

Opening night at the Met, on Sept. 18, 1967, was a far cry from the glittering affair of the previous year, and the 1967–68 season did not promise much excitement either. There were new productions of Charles Gounod's *Romeo et Juliette,* with the handsome couple Mirella Freni and Franco Corelli in the title roles, and Engelbert Humperdinck's *Hansel and Gretel.* Perhaps the most interesting new production was *Die Walküre,* by Richard Wagner, staged and conducted by the Austrian conductor Herbert von Karajan. This production was first seen at the Salzburg Easter Festival in Salzsburg, Austria.

The Metropolitan announced at the start of its second season that the nearly disastrous financial condition of 1966 had been rectified.

During its spring season, the New York City Opera offered the world premiere of a new work by the late Vittorio Giannini, *The Servant of Two Masters,* based on a *commedia dell'arte* piece by Carlo Goldoni, and presented with verve and humor in a production by Tito Capobianco. In its fall 1967 season the City Opera offered Rimsky-Korsakov's rarely performed extravaganza *Le coq d'or.*

In June, the Hamburg State Opera became the first major foreign opera company to appear on the Met's new stage. The company, which had earlier performed at Expo 67, arrived in New York in time to participate in the new 3-week Lincoln Center Festival. In the course of 10 days the company presented six contemporary operas. Three of these had not previously been seen in New York. A fourth, *The Visitation,* by the American composer Gunther Schuller, had its U. S. premiere. Although the opera had been praised enthusiastically at its world premiere in Hamburg, Germany, in October, 1966, it was coldly received in New York. The way in which this production depicted the persecution of a Negro in the deep South seemed too unrealistic and cliché-ridden to be taken seriously by an American audience. A later production of *The Visitation,* offered by the San Francisco Opera in November, met with greater success.

A more successful premiere took place in Washington on May 19, with the performance of Alberto Ginastera's second opera, *Bomarzo,* by the Washington Opera Society. The same men, conductor Julius Rudel, director Tito Capobianco, and designer Ming Cho Lee, who had been responsible, in 1966, for the New York City Opera's spectacular production of Ginastera's first opera, *Don Rodrigo,* worked together on *Bomarzo. Bomarzo* in itself created a stir, with its unconventional hunchbacked nonhero (a duke obsessed with the idea of his immortality), a torrid seduction scene, and hints of homosexuality. However, the work attracted even more attention when performances scheduled for the Teatro Colón in Buenos Aires, Argentina, were canceled by the mayor of that city on the grounds that it was "obsessed with sex and violence." The banning of this opera there was particularly ironic since Buenos Aires is Ginastera's hometown.

In December 1966, the Metropolitan announced its intention of disbanding its young touring company, the Metropolitan Opera National Company, in 1967, after only two seasons. The National Company closed because of the poor financial condition of the parent company—its first season in the new house had cost the Metropolitan $3 million more than had been estimated. Shortly after the Met's announcement, the National Council on the Arts promised an allocation of $350,000 if another national touring company could be formed. This led to the birth of the American National Opera Company, which was put under the guiding hands of Boston Opera's Sarah Caldwell. The company began operations in September 1967. The repertory for its initial season consisted of Verdi's *Falstaff*, Puccini's *Tosca*, and Alban Berg's *Lulu*.

On the West Coast, Los Angeles, which still has no opera company of its own, was host in November and December 1967 to the New York City Opera. This was the New York City Opera's first appearance in Los Angeles. San Francisco and Los Angeles plan to pool their operatic resources in 1969 and eventually form a San Francisco-Los Angeles Opera Association, which will provide opera for both cities. In San Diego, Hans Werner Henze's *The Young Lord* was given its U. S. premiere on Feb. 17, 1967.

Concert Artists in the United States. Several ambitious concert series took place in New York during the year. In February and March, Soviet cellist Mstislav Rostropovich appeared in Carnegie Hall with the London Symphony Orchestra under Gennadi Rozhdestvensky. He gave eight concerts in 18 days, performing 30 major works for cello and orchestra. These included concertos by Haydn, Brahms, and Benjamin Britten, as well as the world premieres of Lukas Foss' *Concerto for Cello and Orchestra* and Walter Piston's *Variations for Orchestra*.

Pianist Lili Kraus concluded her marathon concert series of the complete Mozart piano concertos, begun in October 1966, at Town Hall, with Stephen Simon conducting the Mozart Chamber Orchestra. Baritone Dietrich Fischer-Dieskau and accompanist Gerald Moore gave three lieder concerts at Carnegie Hall in March—an evening each of the songs of Schumann, Schubert, and Beethoven. Moore retired in 1967 and these performances marked his farewell appearances in New York.

Ravi Shankar, the Indian sitarist, mesmerized sold-out houses from coast to coast with his concerts of ragas, an ancient and classical form of Indian music. He attracted people of all ages and from both sides of the musical fence, classical and pop. He appeared in several summer music festivals, and gave two concert series at Philharmonic Hall in New York and one at the United Nations.

Summer Festivals in the United States. The latest additions to the summer cultural activities on the East Coast were the Metropolitan Opera's Verdi Festival in Newport, R. I., during August, and the Lincoln Center Festival in June.

In Newport, when the weather permitted, the Met presented open-air concert performances of Verdi's major works; voice recitals, opera readings, and chamber music in Newport's sumptuous and stately homes; taped performances of early and rare Verdi operas; movies with operatic themes, including the Marx Brothers' *Night at the Opera;* and discussion sessions with general manager Rudolf Bing and other Met dignitaries.

The Lincoln Center Festival encompassed all the performing arts: drama, music, film, and musical theater. Musical offerings included productions by the Hamburg State Opera; presentations by the Met of works from its repertory, including *Un ballo in maschera*, *La Traviata*, and *Die Zauberflöte;* concerts by the Orchestre de la Suisse Romande, whose conductor, Ernest Ansermet, was making his last appearances with the orchestra; appearances by Yehudi Menuhin and the Bath Festival Orchestra; and performances by the New York Philharmonic. The New York Philharmonic's programs featured several premieres of commissioned works. These included Ned Rorem's *Sun*, a song cycle; Gunther Schuller's *Triplum;* and Ezra Laderman's *Magic Prison*, a narration with the orchestra.

From New Mexico came the sad news that the Santa Fe Opera House had burned to the ground just as its summer season was getting under way. However, almost all the sets were saved, and despite the destruction of costumes, orchestral scores, and some musical instruments, the company successfully completed its season in a high school gymnasium. Director John Crosby immediately launched a nation-wide appeal for funds and called in architects for a new, fireproof house. One result of the disaster was a delightful performance of *La Bohème* in modern dress, with Musetta in a miniskirt. Highlights at Santa Fe were the American premieres of Paul Hindemith's *Cardillac* and Henze's *Boulevard Solitude*.

Britten's *The Burning Fiery Furnace* received its U.S. premiere at the Caramoor Festival, Katonah, N. Y. The story of Nebuchadnezzar and the trial of three Israelites is told in the same manner as Britten's earlier church parable, *Curlew River*. It is per-

LOUIS MELANÇON

AN OPERA based on Eugene O'Neill's play *Mourning Becomes Electra* received its world premiere at the Metropolitan Opera on March 17. Marie Collier and Evelyn Lear sang the leading roles in Marvin David Levy's work.

formed as a Christian mystery play by a group of monks accompanied by an instrumental ensemble of lay brothers.

European Highlights. With the death in 1966 of Wieland Wagner, and rumors of disagreements in the Wagner family, the future of the Bayreuth Festival became the subject of much speculation. Wieland's younger brother Wolfgang is next in line of succession as director of the festival. However, his views on the production of his grandfather's operas differ markedly from those of his older brother. Wolfgang favors busy, realistic settings, rather than Wieland's austere, stylized, and dark stages. A case in point was Wolfgang's version of *Lohengrin.*

In April 1967 the Bayreuth Festival Ensemble made its first appearance outside Europe at the Osaka International Festival in Japan. The company presented two of Wieland Wagner's most recent productions, *Tristan and Isolde* and *Die Walküre,* with such outstanding artists as Birgit Nilsson, Anja Silja, Hans Hotter, and Wolfgang Windgassen. The Osaka stage was made to resemble that at Bayreuth as closely as possible.

Herbert von Karajan introduced a new musical event in Salzburg, the Salzburg Easter Festival, of which he assumed total artistic and financial responsibility. Karajan embarked on a 4-year project to produce Wagner's entire *Der Ring des Nibelungen* cycle, adding one opera a year. The project started in 1967 with *Die Walküre,* the second of the four operas in the cycle. *Die Walküre* was later exported to New York, to be incorporated into the Met's season in November. Nothing was changed from the Salzburg production except that the part of Brünnhilde, sung by Régine Crespin in Salzburg, was first sung by Birgit Nilsson in New York.

In England the year was marked by the opening of three new concert halls: the Maltings, at Snape, near Aldeburgh, and the Purcell Room and Queen Elizabeth Hall, both adjoining London's Royal Festival Hall on the South Bank. The Maltings is, as the name suggests, a converted malt house. The building has been praised for its beauty and acoustical excellence, and its opening has made considerable expansion of the Aldeburgh Festival programs possible. The two halls in London were both designed for recital purposes. The Queen Elizabeth Hall seats just over 1,000 people, and the Purcell Room, 372.

JANIS IAN, one of the youngest of the pop musicians, gave voice to controversial aspects of the generation gap.

MGM RECORDS INC.

The Spoleto Festival of Two Worlds celebrated its 10th anniversary in great style, with the announcement of a gift of $100,000 a year for the next 10 years from patron Samuel Rubin. Among the most interesting events of the 1967 season was a new production of Mozart's *Don Giovanni,* staged by Gian-Carlo Menotti and conducted by Thomas Schippers, with sets and costumes designed by the English sculptor Henry Moore.

Elsewhere in Italy the 100th anniversary of Arturo Toscanini's birth was marked with special commemorative concerts in Florence, at La Scala in Milan, and in Parma, his native city. The house in which Toscanini was born has been bought by his children for conversion into the Toscanini Library and Museum.

Popular Music. The blending of rock'n'roll with other musical elements, such as jazz and folk, has resulted in a wide variety of pop music styles. Most of these could be heard at the first International Pop Festival, held in Monterey, Calif., for three days in June 1967.

The cross between rock and topical folk songs, initially developed by Bob Dylan as folk-rock some three years ago, has itself been crossbred with rhythm-and-blues. Exponents of this hybrid type of music at Monterey included such blues-rock groups as the Grateful Dead, Blues Project, The Byrds, and Buffalo Springfield. The original Negro rhythm-and-blues tradition was represented by Otis Redding and his band.

Simon and Garfunkel, a duo who write their own gentle yet satirical songs, also appeared at the festival. Ravi Shankar, who has inspired the widespread use of the Indian sitar and subtle Oriental harmonies among pop groups, was the only paid performer at the festival.

The Beatles continued as the leading innovators in popular music, with experiments with unusual instrumentation, changing rhythms (3/4 and 4/4 in the same song, for example), and comments on the social scene. Their newest album, *Sgt. Pepper's Lonely Hearts Club Band,* contains several significant numbers: *Lucy in the Sky with Diamonds,* whose title initials and evocative lyrics (". . . with tangerine trees and marmalade skies") hint broadly at the influence of drugs; *She's Leaving Home,* a sad song about a girl running away from home and her parents' reaction to this; and *A Day in the Life* and *Good Morning, Good Morning,* both of which stress the banality of everyday modern life.

Leonard Bernstein, in an hour-long television documentary on the popular music scene, drew national attention to Janis Ian, a teenage girl whose songs (such as *Society's Child* and *Younger Generation Blues*) express the disdain the younger generation feel for their parents' conventions and values, including their materialism and racial prejudices.

SHEILA SCHULTZ
Managing Editor, "Musical America"

MUSLIMS. See RELIGION—*Islam.*

NARCOTICS

Several significant new programs for the rehabilitation of narcotics users in the United States were begun in 1967.

Government Programs. Responsibility for the implementation of the Narcotic Addiction Act of 1966, which established a national policy of civil commitment of drug addicts, was given to the National Institute of Mental Health. An appropriation of $15 million for the year was made, and agencies in several cities agreed to provide treatment services. Under the program, a patient who responds favorably to treatment is released to outpatient supervision, but criminal proceedings against him may be resumed if he cannot be treated effectively. The National Institute of Mental Health was also advised to plan research and to develop a core of educational material on narcotics.

In 1967 the National Crime Commission recommended that the enforcement staffs of the Bureau of Customs and the Bureau of Narcotics be increased and that state and federal drug laws permit maximum discretion to courts and correctional authorities so that they can deal flexibly with narcotics users.

In New York state what may become the most substantial state effort in the rehabilitation of narcotics users began on April 1 when New York's Narcotics Addiction Control Commission began operations. This program provides for the compulsory treatment of narcotics addicts. Persons convicted of a crime are committed to treatment centers instead of being sent to jail. The program has made considerable progress in starting a substantial number of activities. It has, however, met difficulties in acquiring a professional staff, and its first year was marked by several well-publicized incidents of addicts escaping from the treatment facilities.

The New York City program for the treatment of narcotics addicts also began operations in 1967, with a budget of over $16 million for the year. The program stresses the employment of former addicts at all stages of treatment. Its first phase—acceptance of the addict into the program and community orientation—is followed by detoxification and psychotherapy. Reentry houses assist the addict in reestablishing himself in the community. The program includes juvenile evaluation and prevention units, and a network of community education activities.

Narcotic Substitutes. In 1967 the Albert Einstein College of Medicine and the New York Medical College studied the effects of cyclazocine in the rehabilitation of narcotics users. Cyclazocine is a long-acting nonaddictive drug that, in proper doses, reduces the physiological effects of any opiate. Thus, when taken daily, cyclazocine prevents the development of physical dependence on opiates. Preliminary studies have tentatively demonstrated that the drug can help some compulsive narcotics users to become abstinent provided that individual and group therapy are also available. Research is currently under way to develop a form of cyclazocine whose effects would last 7 to 10 days.

The New York City methadone research program, headed by Dr. Vincent Dole and Dr. Marie Nyswander, continued throughout 1967. (Methadone is an addictive drug that makes it impossible to feel the effects of heroin.) After studying 635 former addicts, the program reported that 64% of the addicts were working, 24% had become "socially acceptable," and 12% did not respond to treatment.

International Agreement. On May 25, 1967, President Johnson signed the Single Convention on Narcotic Drugs. This treaty, accepted by 58 other nations and originally promulgated by the United Nations in 1961, places the international control of drugs under one central agency.

Charles Winick
Director, Program in Drug Dependence and Abuse
American Social Health Association

NASSER, Gamal Abdel. See United Arab Republic.

NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards (NBS) of the U. S. Department of Commerce serves in advancing the nation's economic and industrial growth. To this end, it conducts research and provides technical services in four broad areas: (1) basic measurements and standards; (2) materials data and standards; (3) technological measurements and standards; and (4) transfer of technology.

During 1967 significant progress was made in understanding fundamental processes that occur in molecular gas lasers. Data from high-resolution infrared absorption measurements were used to explain laser action in ammonia, carbon disulfide, and cyanide-type compounds. In particular, laser action in the so-called "CN" laser was shown to result from hydrogen cyanide (HCN).

Advances in analytical chemistry included improvements in the precision of measurements. Precision in determining the amount of oxygen in steel by activation analysis was increased tenfold; the precision in determining the relative abundance of lead isotopes by mass spectrometry was increased fivefold; and the precision of differential flame emission spectrophotometry was increased from one part in 100 to one part in 1,000.

A major problem in biochemical analysis is to determine the total elemental content of proteins without destroying them. In 1967 a nondestructive method was developed for determining all of the elements in proteins; this method offers considerable promise in aiding biochemical research.

For studying chemical reactions involving heavy water (deuterium oxide), it is more important to have accurate values for the ionization constant of this solvent. NBS scientists were able to obtain more accurate values for the constant over the range from 41° to 122°F (5° to 50°C) by using deuterium oxide of higher purity than had previous investigators.

In work done for the U. S. Arms Control and Disarmament Agency, a convenient, foolproof method was devised for "fingerprinting" missiles and other metal objects. In this method a photomicrograph or a replica of the metallic microstructure is used as a positive and unique means of identification.

The NBS developed an empirical formula for predicting lens resolving power. This formula, which gives good agreement with measured values, was expected to eliminate some of the uncertainty in designing photographic systems and to provide lens manufacturers with a means for accurately evaluating resolving power.

In 1967 the bureau established an Office of Vehicle Systems Research to provide technical aid to the Department of Transportation in developing motor vehicle safety performance standards.

A. V. Astin
Director, National Bureau of Standards

WIDE WORLD

LEADERS who helped form and implement United States policy in Vietnam in 1967 included (*left to right*) Gen. Earle Wheeler, chairman of the Joint Chiefs of Staff; Gen. William Westmoreland, American commander in Vietnam; and Secretary of Defense Robert McNamara. They are shown conferring with President Johnson (*right*) in a July meeting that preceded further escalation in Vietnam.

NATIONAL DEFENSE

In 1967 the deepening involvement of the United States in the Vietnam War competed with other somber events for the attention of those concerned with defense policies. In regard to the war, the Johnson administration was criticized by those who sought a de-escalation of military activity as well as by those who urged that an intensification of the war effort be made in order to force the enemy to the conference table. Caught in the crossfire from its critics, the administration gradually escalated the war while continuing its familiar defense of the war by citing the duty to defend the freedom of South Vietnam and to fulfill American pledges to the South Vietnamese government. Late in the year officials such as Vice President Humphrey and Secretary of State Rusk added another reason for U. S. participation in the war—that American national interest required the United States to oppose Chinese expansionism. (See also FOREIGN POLICY.)

Ominous reports from the USSR indicated that the Soviets were strengthening both their strategic offensive and defensive forces. In November the USSR announced it had developed nuclear-tipped orbital missiles that could attack from a 100-mile-high orbit, giving only 3 minutes' warning. The appearance of new tactical aircraft, plus the report that the Soviet Union was building its first two aircraft carriers, were interpreted by many to mean that the Soviets were planning to challenge the United States' superior capability to respond to brushfire wars in Asia, the Middle East, and elsewhere. Of possibly greater portent was the fact that Communist China continued to make spectacular progress in the development of nuclear weapons. The Chinese exploded a hydrogen bomb in June.

The War in Vietnam. The heightened participation of the United States in the war was attested to by the statistics of the conflict. By the year's end 472,000 American fighting men were deployed in the war zone and 50,000 more were projected for duty by mid-1968. As 1968 began, nearly 16,000 Americans had died in the struggle since 1961. Of these, 9,353 were killed in 1967. The total of U. S. planes shot down since 1961 reached 1,861, of which 722 went down in the North.

In the ground war, efforts to protect the inhabitants of villages from Vietcong attack continued, and additional attempts were made to win peasant support for the Saigon government. Search-and-destroy operations also were widely pursued as American and South Vietnamese forces sought to find, engage, and destroy Vietcong and North Vietnamese units.

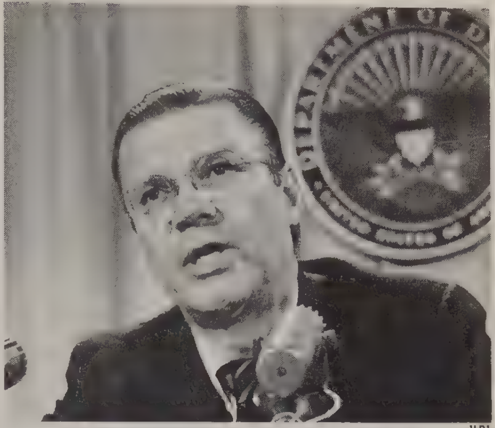
Increased emphasis was given in 1967 to the air war over North Vietnam and to efforts to seal the infiltration routes leading into South Vietnam from the north. In the air war, the list of military targets in North Vietnam that were spared bombing because of political considerations gradually was reduced until only a few targets remained unattacked. The bombing of bridges, power stations, rail yards, and airfields near and within the cities of Hanoi, the capital, and the chief port of Haiphong was generally believed in the United States to have hindered the movement of supplies and men from the north to the south. However, the precise amount of hindrance caused by the bombing to the North Vietnamese supply effort was a matter of considerable debate. Contrary to what opposing groups expected, the bombing neither caused North Vietnam to surrender nor incited war by Communist China.

In other action designed to assist in the prosecution of the war, the United States began flying B-52 heavy jet bombers off airfields in Thailand. These planes joined others based on Guam in making raids on suspected areas of enemy concentration in South Vietnam. Authorization was made for the recommissioning of the battleship *New Jersey* which was in protective "mothball" storage at the Philadelphia Navy Yard. The ship will be used in the bombardment of enemy positions. Plans also were announced to build an electronic barrier below the demilitarized zone (DMZ) which divides North from South Vietnam, to assist in preventing infiltration of troops and supplies. At the end of 1967, U. S. and Cambodian leaders were discussing ways to keep Communist troops from finding sanctuary in Cambodia. (See also VIETNAM WAR.)

Basic Defense Policy. The debate over the war sharpened examination of U. S. defense policy, particularly in regard to the amount and kind of intervention the United States should undertake in the affairs of other nations, and the degree to which Communism ought to be contained by American power. Nevertheless, the fundamental defense policies of the United States were unaltered in 1967.

In regard to thermonuclear war the basic policy

Defense Secretary McNamara Leaves Pentagon for World Bank



UPI

The disclosure, through a news leak on Nov. 27, 1967, that President Johnson had nominated Secretary McNamara for the presidency of the International Bank for Reconstruction and Development (World Bank) reinforced speculation that McNamara's views were in serious conflict with those of the majority of the administration and of the Joint Chiefs of Staff. The secretary, who has been described by some as an emotionless "human computer," managed in 1967 to convey a sense of dismay over the momentum of the arms race. So pronounced was his reluctance to accede to at least two major recommendations that the Joint Chiefs made for prosecuting the Vietnam War that he was described in some quarters as "a secret dove." In accepting the World Bank post, however, McNamara declared that he and the President had worked in "complete harmony."

Vietnam. During the summer, McNamara opposed the Joint Chiefs' recommendation to expand the number of bombing targets in North Vietnam. He contended that the target list already was as extensive as necessary in the light of the United States' limited war objectives. He denied, as the Joint Chiefs claimed, that increased bombing would curtail American combat losses.

The defense secretary also ruffled military feelings when, following his ninth trip to the war zones in June, he commented rather caustically on the ineffectiveness of troop use there. He also apparently opposed giving Gen. William C. Westmoreland, the American commander in Vietnam, as many additional forces as he requested. In September, McNamara approved a controversial plan to construct a 15-mile long anti-infiltration barrier south of the demilitarized zone, as a possible alternative, some commentators felt, to continued bombing attacks on North Vietnam.

National Strategy. Another controversial recommendation by the military establishment that McNamara resisted was a proposal to construct a network of anti-ballistic missile (ABM) emplacements to defend against a possible ICBM attack. In January he argued before Congress against deploying an ABM system. However, in a San Francisco speech on September 18, he announced plans to build a "thin" ABM defense against the potential Communist Chinese missile threat.

In the same speech, marked by an appeal to the Soviets for mutual deceleration of the arms race, McNamara set forth a powerful, statistics laden argument against the idea that any ABM defense could provide adequate protection against a heavy missile attack. (See also MISSILES.)

Background. McNamara became secretary of defense under President Kennedy in 1961 and served in that post longer than any other man. Before his appointment he had been president of the Ford Motor Company. McNamara, a graduate of the University of California (1937) as well as the Harvard School of Business Administration (1939), taught at Harvard for a time until 1943. He was a statistical control officer with the Army Air Forces in World War II.

JACK RAYMOND
Clifton-Raymond Associates, Inc.
Author of "Power at the Pentagon"

was one of seeking to deter an attack upon the United States, and possibly western Europe, by the maintenance of a strategic offensive force capable of destroying immense amounts of an enemy's industrial capacity and killing millions of his citizens in retaliation for an attack. The policy of promising "assured destruction" to any attacker of the United States was supplemented by a policy known as "damage limitation." The latter, based on the deployment of strategic defensive forces such as interceptor planes, antiaircraft missiles, and fallout shelters, is designed to minimize destruction at home should deterrence fail and an attack be launched against the United States.

General-purpose forces and airlift and sealift forces were maintained, or, in the case of Vietnam, used to implement the policy of "flexible response" below the thermonuclear level. According to this doctrine the United States will meet aggression that does not justify a thermonuclear response by resorting to graduated force tailored to fit each attack.

Sophisticated intelligence-gathering sensor systems, some of which operated in the airspace above other nations, were employed to gather data used by various organizations concerned with national defense. (See also ESPIONAGE AND INTELLIGENCE.)

Strategic Offensive Forces. The long-range ballistic missiles and bombers of the Strategic Air Command and the intermediate-range missiles of the Navy missle-launching submarines stood ready to implement the "assured destruction" policy with their nuclear bombs and warheads. The primary delivery systems continued to be nearly 600 B-52 heavy jet bombers, some of which from their base in Guam, were engaged in non-nuclear bombing in Vietnam; 80 B-58 medium jet bombers; 656 intermediate-range Polaris A-2 and A-3 missiles carried aboard nuclear-powered submarines; 1,000 Minuteman I and II intercontinental-range missiles housed in concrete silos sunk into the ground; and 54 intercontinental-range Titans, the largest U. S. missile.

Development continued of the Poseidon missile, which is programmed to replace the Polaris, and of the Minuteman III, which will replace the previously deployed versions of Minuteman. Two hundred and ten FB-111's,the medium jet bomber version of the controversial changeable-wing F-111, were ordered into production to enter active service in 1968 or 1969. The Johnson administration kept open its option to develop a new bomber called the AMSA (Advanced Manned Strategic Aircraft), for possible deployment in the 1970's.

In September the Pentagon announced that a technological advancement designated MIRV (Multiple Independent Re-entry Vehicles) was being developed. The new system would permit a single missile to carry several warheads that could be directed to separate targets, and would constitute to a large extent the U. S. response to the Soviet deployment of an antimissile force. The U. S. government anticipates that in the event of war the use of MIRV's to overwhelm Soviet defenses with sheer numbers of warheads—plus the employment of electronic devices to confuse enemy radars—would provide enough penetration to assure the destruction of that country.

Strategic Defensive Forces. The United States undertook a major step in 1967 to improve its forces designed to limit damage should nuclear war break out. After several years of debate, and the apparent failure to pursuade the Soviet Union to cease its antiballistic missile deployment, the U. S. government announced in September that it would begin building a light antimissile defense system in 1968.

In making the announcement, Defense Secretary McNamara described the new system, formerly called Nike-X and renamed Sentinel, as a "Chinese-oriented" force designed to cope with the limited missile threat that China might pose to the United States as early as 1972. McNamara warned against hopes that the Sentinel system could be expanded into one that would provide a successful defense against the large and sophisticated Soviet missile force. He contended that the relatively primitive Chinese technology would not for some time be able to equip Chinese missiles with the penetration aids necessary to counter the Sentinel system, whose radically new nuclear warhead was to emit X-ray bursts to destroy incoming missile warheads.

Costing an initial $5 billion, the Sentinel system will consist of a network of radars and communication-guidance equipment and nuclear-armed interceptor missiles. The latter, alerted and guided by the former, will be designed to intercept incoming enemy missile warheads far from the United States.

General Purpose Forces. Assigned the task of meeting aggression below the thermonuclear level, the Army, Marine, Navy, and Air Force units assigned to the general purpose forces in 1967 totaled 21 operational divisions, 15 attack aircraft carriers, and artillery, missiles, planes, and ships.

Airlift and Sealift Forces. Assigned the mission of transporting and supplying the general purpose forces, the airlift and sealift forces continued to increase in size due to the war. Work progressed on the C5A jet transport, which is scheduled to fly in 1968. It will carry between 500 and 700 troops or very heavy equipment.

Military Alliances. After nearly 20 years the bonds which originally held the North Atlantic Treaty Organization together continued to loosen, and efforts were being made to find new and meaningful goals for NATO states. The most serious internal threat to NATO remained President Charles de Gaulle of France. In compliance with his wishes the United States withdrew its military forces from France and the NATO headquarters was moved from near Paris to Brussels, Belgium. A nagging problem that remained unsolved within the alliance was what part the West Germans were to play in the control of NATO nuclear weapons. Particularly difficult was the question raised by the West Germans as to whether they could exercise a veto over use of nuclear weapons stationed on their soil.

The basic external force responsible for NATO's creation, the threat of Soviet aggression, was regarded by many as declining. Official recognition of this condition was made in May when the NATO Council of Defense Ministers instructed the military command to make adjustments to the growing climate of reduced tension between East and West. Part of the adjustment will involve the withdrawal from Europe in 1968 of 35,000 U. S. troops and four Air Force fighter squadrons. As if to allay fears of additional withdrawals, the United States made clear its view that the 225,000 Americans remaining after the withdrawal should not be further reduced unless reciprocal Soviet action were forthcoming. Late in the year the NATO nations agreed that altered conditions in Europe warranted an attempt to redesign NATO into an instrument for coordinating an effort to reduce East-West tensions further. (See also Europe; North Atlantic Treaty Organization.)

The defense arrangements between the United States and Japan were strained to some extent by Japanese feeling that the United States should return the island of Okinawa, which has been an American base since it was captured in World War II, and other Pacific islands. The United States took the position that Okinawa was essential to U. S. defense against the growing threat from China. A form of compromise was finally reached between President Johnson and Japanese Prime Minister Eisaku Sato when the two leaders agreed, on Nov. 16, 1967, to the return of the island of Iwo Jima and the Bonin Islands to Japanese rule, and the establishment of a joint American-Japanese Advisory Committee which will make recommendations concerning the administration of Okinawa to the U. S. high commissioner for the Ryukyus.

Budget, Manpower, and Administration. The estimated defense budget for the fiscal year ending June 30, 1968, was approximately $69.9 billion. Of this figure some $20 billion went directly to support of the Vietnam War. The number of personnel in the armed services stood at 3,400,000.

The selective service system became more heavily embroiled in disputes arising from the larger arguments over the war. The monthly draft calls were always met; but there were draft card burnings, although such acts had been made a federal crime, and groups composed largely of students were active in distributing information on how to avoid the draft. Some young men went to Canada and declared their intention to become Canadian citizens rather than be drafted. (See Selective Service.)

Defense Secretary McNamara resigned (see biography on page 475) and was replaced in early 1968 by Clark Clifford, Washington lawyer and confidant of presidents. Cyrus R. Vance also resigned, on June 30, 1967, as deputy secretary of defense and was succeeded by Paul H. Nitze, who left his position as secretary of the Navy. John T. McNaughton, designated to become secretary of the Navy, was killed in an airliner crash on July 19 and the post was filled by Paul R. Ignatius, a former assistant secretary of defense. Stanley R. Resor remained secretary of the Army, and Harold Brown, Air Force secretary.

Gen. Earle G. Wheeler continued as chairman of the Joint Chiefs of Staff, Gen. Harold K. Johnson as chief of staff of the Army, and Gen. John P. McConnell as chief of staff of the Air Force. Adm. David L. McDonald retired July 31, 1967, as chief of naval operations and was succeeded by Adm. Thomas H. Moorer. Gen. Wallace M. Greene retired Dec. 31, 1967, as commandant of the Marine Corps, and was succeeded by Gen. Leonard F. Chapman, Jr.

(See also AIR FORCE; ARMY; COAST GUARD; MARINE CORPS; NAVY.)

ROBERT M. LAWRENCE
Stanford Research Institute

NATIONAL STUDENT ASSOCIATION. See COLLEGES AND UNIVERSITIES; ESPIONAGE AND INTELLIGENCE.
NATIONAL GEOGRAPHIC SOCIETY. See GEOGRAPHY.

NATIONAL GUARD

Reorganization of the U. S. Army Reserve Components began on Dec. 1, 1967, after years of debate. On June 2 the Defense Department disclosed that it had abandoned its plans to (1) merge the Army Reserve with the Army National Guard or (2) reduce Reserve strength by 100,000 men.

The Army National Guard, with total paid drill strength set at 400,000, including 12,000 authorized by the secretary of defense on Nov. 6, 1967, was allotted 8 combat divisions and 18 brigades under the reorganization. It also was allotted 2 military police brigades, 1 transportation corps motor transport command, 1 support brigade, 6 engineer construction battalions, 3 signal battalions, 15 hospitals, 54 composite service companies, 20 truck companies, and 8 ordnance companies.

Selected Reserve Force. During the period of reorganization the concept of the Selected Reserve Force (SRF), consisting of forces from the Army National Guard and the U. S. Army Reserve, remained relatively unchanged. The counterpart of the SRF in Air National Guard, known as the "Combat Beef" program, was composed of 9 selected fighter groups, 4 tactical reconnaissance groups, and 1 tactical control group. This was the principal backup force for the U. S. Air Force's Tactical Air Command (TAC). Guard units in 1967 participated in 11 training exercises, mainly in Alaska, Hawaii, Puerto Rico, and central Europe.

Civil Emergency Service. Guardsmen were called out by their governors in nearly half the states in 1967 to cope with natural disasters—blizzards in 3 states, forest fires in 6 states, tornadoes in 5 states, and floods in 10 states.

Guardsmen also were called out to deal with civil disturbances in 17 states, and they were used on a large scale in Newark, N. J., and Detroit. After hearings in August by the House Armed Services Committee, new techniques in riot control were adopted and special 32-hour courses were given to Army and Air Guardsmen. The 12,000 men authorized in November were to compose 137 units, chiefly for state emergencies. (See also CIVIL RIGHTS.)

Support for the Air Force. The Air Guard continues to support the Air Force's Military Airlift Command (MAC), flying over 1,300 cargo and medical missions each year to all parts of the globe. In June 1967 the Air Guard flew its 1,000th mission to Vietnam. Air Guard tactical fighter, tactical reconnaissance, air refueling, and air commando units constitute TAC's principal strategic reserve.

Air Defense. Nike Hercules missile batteries of the Army National Guard provided 43% of the missile air defense of the 48 contiguous states and 100% for Hawaii. Air Guard fighter-interceptor units on runway alert provided over half the U. S. defense against aerial invasion.

Strength. As of July 31, 1967, the Army National Guard had 34,568 officers and 382,861 men in 4,001 units. The Air Guard had 10,571 officers and 73,930 men in 856 units.

WINSTON P. WILSON, *Major General, USAF*
Chief, National Guard Bureau

NATIONAL HIGHWAY SAFETY BUREAU

In recognition of the mounting seriousness of the highway accident losses sustained each year in the United States, the federal government took steps during the year to bring the nation's resources to bear on the problem for the first time. The result was the formation of the National Highway Safety Bureau, by executive order of President Johnson on June 6, 1967. Part of the Department of Transportation, the bureau was formed from two government agencies that had been provided for by two important acts passed the previous year—the National Traffic and Motor Vehicle Safety Act of 1966 and the Highway Safety Act of 1966.

President Johnson had asked Congress in 1966 to approve legislation dealing with the highway safety problem. Traffic accidents in 1966 claimed some 53,000 lives, injured 10,000 persons each day, and cost $10 billion. Congress responded by approving the two important highway safety acts, and both were signed by the President on Sept. 9, 1966.

Motor Vehicle Safety. Under the National Traffic and Motor Vehicle Safety Act, the Secretary of transportation is authorized to issue and enforce federal motor vehicle safety "performance standards" for new vehicles. On Jan. 31, 1967, 20 motor vehicle safety performance standards were issued, effective for all vehicles manufactured after Jan. 1, 1968. Standards for 1968 deal with automobile braking; safety belts; energy-absorbing steering assemblies; crash padding; laminated windshields; windshield wiping, washing, and defrosting; truck lighting; rear-view mirrors; fuel tanks; and door locks. Tire quality and safety standards were issued on Nov. 10, 1967, also effective Jan. 1, 1968.

Ten new safety standards that may supplement those already set for 1968 were outlined on Oct. 13, 1967. Possible new features for automobiles include devices to protect infants during a crash.

The law also requires that vehicle manufacturers notify purchasers, warranty holders, dealers, and the secretary of transportation of any vehicles known to have safety-related defects. More than 3.2 million cars were recalled by manufacturers to repair defects from September 1966 to September 1967.

Highway Safety. Under the Highway Safety Act the secretary of transportation has authority to establish highway safety program performance standards for the states and to assist state and local governments to develop their programs to conform to federal standards. The bureau administers matching federal grants to help the states finance their programs. Under the law each governor is responsible for the program in his state. An additional provision requires expenditure of at least 40% of each state's grant-in-aid funds by local communities.

On June 27, 1966, the secretary issued initial standards for state and community highway safety programs covering 13 areas. These initial standards set performance levels for periodic motor vehicle inspection programs; motor vehicle registration; motorcycle safety; driver licensing; codes and laws; traffic courts; driver education; programs concerned with alcohol in relation to highway safety; the identification and surveillance of accident locations; traffic records; emergency medical services; highway design, construction, and maintenance; and traffic control devices.

Emphasis of the Programs. With an estimated 97.5 million vehicles and more than 100 million licensed drivers in the United States at the end of 1967, and more being added every year, automobile collisions will continue to occur in substantial numbers. Therefore, rather than concentrating primarily on the prevention of collisions, the National Highway Safety Bureau is stressing standards that will reduce deaths and injuries and that will lower property damage.

The problem divides itself into three phases, and each of the highway safety standards and motor vehicle safety performance standards is addressed to one or more of these phases. In the first, or precrash, phase, the operative factors are those that determine the likelihood of collision. Mechanical failure of vehicles, blowouts, drunken driving, certain highway design features, highway lighting and signs and markings all influence the likelihood of collisions.

In the second, or crash, phase, operative factors are those that determine the likelihood of injury or death once a crash occurs. Here the main consideration is the success of the vehicle as a "package" for the protection of its occupants. Energy-absorbing steering columns that act like fire nets rather than spears, better laminated windshields, safety belts, and interior crash padding all help to reduce the severity of accident damage. The proper crash design of the highway can also greatly reduce deaths and nonfatal injuries. All solid objects, such as bridge pillars, must be either eliminated or cushioned with guardrails, and all poles and sign supports must be designed to "break away" gently.

In the third, or postcrash, phase, the principal issues involve the speed and quality of the emergency response, including police, fire, and medical assistance. Deficiencies in emergency services cause thousands of unnecessary deaths.

The Outlook. To provide information needed for many purposes, including setting future standards under both programs, the bureau is authorized to carry out an extensive research program. By Sept. 1, 1967, it had awarded 76 research contracts totaling $8.7 million. Much still needs to be done, since the growing scientific evidence makes it very clear that the majority of deaths and injuries can be eliminated by applying what is already known.

(See also HIGHWAYS.)

WILLIAM HADDON, JR.
Director, National Highway Safety Bureau

NATIONAL PARKS

Public use of the U. S. national park system continued to rise in 1967. In the first seven months of the year, 80,965,807 visits were recorded. This figure represents an increase of nearly 45% over the comparable period of 1966. A total of 139,000,000 visits was anticipated by the end of 1967.

Proposed Park Areas. Bills were filed in Congress calling for the establishment as units of the national park system of some 30 areas of major scenic, historic, and recreational importance. Among these proposed areas are a Redwood National Park, California; North Cascades National Park, Washington; Apostle Islands National Lakeshore, Wisconsin; Sleeping Bear Dunes National Lakeshore, Michigan; Great Salt Lake National Monument, Utah; and Florissant Fossil Beds National Monument, Colorado.

Historic Sites and Landmarks. On May 26, President Johnson signed the act that established the birthplace of President John F. Kennedy in Brookline, Mass., as a national historic site.

The village of Las Trampas, which lies between Taos and Santa Fe, N. Mex., is one of the finest examples of a Spanish-American agricultural community in the United States. It is among seven sites recommended for registered national historic landmark status in 1967 by the Secretary of the Interior's Advisory Board on National Parks, Historic Sites, Buildings and Monuments. Since 1960, when the historic landmarks registry was initiated, 766 sites throughout the nation have been recommended for historic landmark status.

In 1967 the Advisory Board also recommended the inclusion of 40 sites in the National Registry of Natural Landmarks. Among these are the Petrified Gardens near Saratoga Springs, N. Y., and Point Lobos Reserve near Carmel, Calif. The natural landmarks registry was started in 1964, and sites recommended for inclusion therein now total 110, of which 56 have been registered.

These natural and historic landmarks are not administered by the park service, but the service recognizes them with a certificate and plaque.

NATIONAL PARK SYSTEM

Type of Area	Number	Acres
National parks	33	13,627,514
National historical parks	13	33,442
National monuments	81	8,944,911
National military parks	11	29,371
National memorial parks	1	69,351
National battlefields	5	2,742
National battlefield parks and sites	7	7,950
National historic sites	43	4,879
National memorials	20	5,322
National cemeteries	10	220
National seashores	7	202,039
National parkways	5	113,548
National lakeshores	2	0.0
National capital parks	1	7,973
White House	1	18
National recreation areas	12	3,478,852
Other Areas	10	24,081
Total	262	26,552,213

Appointments. Secretary of the Interior Stewart L. Udall appointed two new members of the advisory Board on National Parks, Historic Sites, Buildings and Monuments. The new members are James W. Whittaker of Redmond, Wash., and Laurance G. Henderson of Washington, D. C. Whittaker is chairman of the Washington State Parks and Recreation Commission and a world-famous mountain climber. Henderson, a business executive in private life, coauthored *With Heritage So Rich* (1966), a report of a Special Committee on Historic Preservation of the United States Conference of Mayors.

GEORGE B. HARTZOG, JR.
Director, National Park Service

NATIONAL SECURITY. See NATIONAL DEFENSE.

NATO. See NORTH ATLANTIC TREATY ORGANIZATION.

NAVY

UPI

FIRE ABOARD THE *FORRESTAL* in late July took a massive toll in lives and equipment and forced the Navy aircraft carrier out of Vietnam service for months.

NAVY

The United States in 1967 received the first real challenge to its dominance at sea from the Soviet Union. This challenge did not come in the Far East, where the major part of the U. S. Navy was engaged in combat operations in Vietnam, but in the Mediterranean. The challenge was an outcome of the June 1967 Israeli-Arab war and the closing of the Suez Canal.

Israeli-Arab War. The strong naval presence of the United States in the Middle East when the Israeli-Arab war began was believed by European observers to be the major factor in keeping the war from escalating. This time there was no Soviet threat of using nuclear weapons, as there was in 1956. The USSR sent some surface warships into the Mediterranean, but they created a mere illusion of Soviet power. The U. S. Sixth Fleet, on permanent station in the Mediterranean, included the carriers *America* and *Saratoga,* while a third, *Intrepid,* bound for Vietnam and having passed through the Suez Canal shortly before, was available if needed. Polaris submarines were also in the Mediterranean, and a battalion of Marines was embarked in amphibious ships.

The U. S. Navy was directly involved in one serious episode of the Israeli-Arab war. On June 8 Israeli planes and motor torpedo boats attacked the U. S. communications intelligence ship *Liberty* which was in international waters but near the war zone. Crew casualties were 35 killed and 75 wounded. One torpedo opened a 39-foot (12-meter) hole across the forward part of the ship. The *Liberty* nonetheless made Malta under her own power. The situation was serious enough for President Johnson to use the "hot line" to inform Premier Kosygin of the USSR that Israel claimed it had mistaken the identity of the ship, and had apologized and offered compensation.

The Israeli destroyer *Elath* was sunk on October 21 by missile-carrying Egyptian gunboats. The success of these Russian-built craft equipped with Styx surface-to-surface missiles with a 20-mile (32-km) range indicates a potential threat to the Sixth Fleet.

After the cease-fire on June 10, Soviet naval strength in the Mediterranean increased markedly. Its ships were supported by afloat logistics, as were those of the U. S. Navy. Following Israel's destruction of 80% of Egypt's oil refineries in retaliation for the *Elath* sinking, eight Soviet warships anchored in the harbors of Alexandria and Port Said. European diplomats credited their arrival with the cooling of tempers that followed. Similar visits of Soviet ships during the summer, after the June cease-fire agreement, had brought a marked reduction in the sporadic artillery and rifle fire along the Suez Canal. Soviet men-of-war and not those of the major maritime powers, ironically, are today performing the 19th century naval function of keeping the peace between small nations.

Soviet Harassment. In Southeast Asia, the Soviet Navy has produced no counterforce to the U. S. Seventh Fleet. But when U. S. and Japanese units were conducting joint training exercises in the Sea of Japan, 300 miles (556 km) from Vladivostok, the USSR did take definite action in the form of harassing tactics. On May 10 and 11, Soviet destroyers came close enough to sideswipe the USS *Walker.*

NEWPORT NEWS SHIPBUILDING PHOTO

CAROLINE KENNEDY vigorously christens the Navy carrier *John F. Kennedy* at Newport News, Va., in May. Enjoying the ceremony are Mrs. Kennedy and John Jr.

Vietnam War. The tasks of the U. S. Navy in Vietnam in 1967 remained essentially the same as in 1965 and 1966: interdiction bombing by carrier aircraft in North Vietnam; amphibious and gunfire assistance to ground troops; control of coastal waters and support of river operations, especially in the Mekong Delta; overseas surface logistic transport for all armed services. (Air support of ground troops by late 1967 had been largely assumed by land-based air forces, both Air Force and Marine.)

An additional task, interdiction gunfire, was assigned in April, when President Johnson approved naval shelling of shore installations and coastal supply routes in North Vietnam. This mission was being performed largely by destroyers with 5-inch (127-mm) guns, since few 8-inch (203.2-mm) gun cruisers were in commission. To obtain increased firepower and additional range, it was decided in 1967 to recommission the battleship *New Jersey*, which had been used for coastal shelling during the Korean War. Overhaul and modernization of the *New Jersey*'s electronic equipment were expected to be completed by mid-1968. It was claimed that 500 to 600 military targets would be within range of her 16-inch (406.4-mm) guns, meaning that many targets could still be reached if aircraft bombing was halted. It was considered that, should American forces be withdrawn to enclaves, naval gunfire would be ideal for supporting tight perimeters. However, the editor of the authoritative *Jane's Fighting Ships* believed that the effectiveness of the *New Jersey* was being overrated.

Port development was the outstanding seapower activity in Southeast Asia in 1967. South Vietnam, having few roads and a railroad system largely destroyed by the Vietcong, had only one major port, Saigon, which is 40 miles up a narrow, winding river. It was therefore necessary to construct on a crash basis additional port facilities along the Vietnamese coast from which troops could receive logistic support by airlift or short truck hauls. The most publicized was Camranh Bay, previously occupied as a naval base by the Russians, Japanese, and French. Over $300 million was allotted for its airport and harbor development. Camranh Bay began supporting troops in the vicinity, but its major significance was strategic—to facilitate naval and air control of the coast of Southeast Asia and the offshore waters.

The Navy also had responsibility for developing the port of Danang to support the 1st Marine Amphibious Corps and associated South Vietnamese units. This work was being done chiefly by Naval Construction Battalion personnel ("Seabees").

Most of the military supplies, as well as commercial goods and items intended for the Agency for International Development (AID), were still being unloaded at Saigon in 1967. This caused such serious congestion that an additional unloading area, called Newport, was constructed north of the city, near the airfield and military complex of Bienhoa.

Harbors in Okinawa and the Philippines were also vital to the support of military operations in South Vietnam in 1967. Okinawa had become a major transshipment port of the Military Sea Transportation Service (MSTS), especially for petroleum and container cargo. Landing ships and towed barges operate from there and from Subic in the Philippines, which is also a forward repair facility and a waiting anchorage for ships scheduled for discharge in South Vietnam.

Naval Accidents. The U. S. Navy was plagued with accidents in the decade 1957–67, the most serious being in carriers. By far the most disastrous was that in the *Forrestal* on July 29, 1967, which took 134 lives, destroyed or damaged 62 of the 80 aircraft on board, and wrecked one third of the ship. *Forrestal,* which had been in the combat area only five days, had to return to Norfolk, Va., for repairs that were expected to take about six months. Her loss placed a heavy burden on the remaining four carriers of the Seventh Fleet and reduced the Navy's strike capability over North Vietnam, since a replacement could not be spared from the Atlantic area. A special investigating panel, headed by Adm. James S. Russell, was appointed to study procedures on all aircraft carriers to determine means of making combat operations less dangerous to men and ships.

New Ships. *John F. Kennedy*, the second conventional-powered carrier built since the nuclear-propelled *Enterprise,* was launched May 27, 1967. However, the next carrier was to have nuclear propulsion. The second nuclear-powered frigate *Truxton* was commissioned on May 27, 1967, and the Navy requested funds for more such destroyer types.

Congressional interest in nuclear propulsion has caused the U. S. Navy to lag in the major advance in surface ship propulsion in 30 years, the gas turbine. Because of their rapid acceleration, gas turbines are especially suitable for antisubmarine ships. Some foreign destroyers, including the Soviet *Kashin* class, already have them. The U. S. Navy's first gas turbine propulsion was installed in 1967 in the Military Sea Transport Service (MSTS) roll-on–roll-off vehicle-carrying ship *William M. Callaghan.*

Two of the Navy's new heavily armed 165-foot (50-meter) aluminum gunboats patrolled South Vietnam's coasts and rivers in 1967. Their speed exceeds 40 knots.

Administration. Secretary of the Navy Paul H. Nitze was made undersecretary of defense in 1967. John J. McNaughton, who was to replace Nitze, was killed in an airplane accident July 19, 1967, before taking office. Undersecretary of the Army Paul R. Ignatius was named 58th Navy secretary. Adm. Thomas H. Moorer, former commander in chief Atlantic, became chief of naval operations on August 1, after the retirement of Adm. David L. McDonald.

JOHN D. HAYES
Rear Admiral, U.S. Navy (Retired)

NEBRASKA

The centennial year of Nebraska's statehood was observed enthusiastically in many communities during 1967. The legislature marked the centennial year by thoroughly overhauling the state tax structure.

Tax Reform. Nebraska's unicameral legislature enacted a combination sales, income, and franchise tax to replace the state property tax that was abolished by referendum in 1966. The law provides for a 2½% sales and use tax, a personal income tax that will fluctuate according to state revenue needs, and corporate income and franchise taxes scheduled at 20% of the individual rate.

Other Legislation. Gov. Norbert Tiemann called the 1967 legislative session "the most significant" in the state's history. In addition to reforming the tax structure, the legislature enacted the state's first minimum wage act, assuring a $1-an-hour wage for an estimated 28,000 workers not covered by federal wage standards. It also passed a statewide voter registration law and a motor vehicle inspection law;

UPI

NUCLEAR-POWERED attack submarine *Ray* undergoes sea trials off the Virginia coast before commissioning in April.

NEBRASKA • Information Highlights

Area: 77,227 square miles (200,018 sq km).

Population: 1,435,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Lincoln, the capital, 149,000; Omaha, 340,000; Grand Island, 28,600; Fremont, 22,500; Hastings, 21,900; North Platte, 17,800; Kearney, 15,600.

Government: *Chief Officers*—governor, Norbert T. Tiemann (Republican); lt. gov., John E. Everroad (R); secy. of state, Frank Marsh (R); atty. gen., Clarence A. H. Meyer (R); treas., Wayne Swanson; supt. of pub. instr., Dr. Floyd Miller; chief justice, Paul W. White. *Legislature*—unicameral (convenes Jan. 7, 1969; met Jan. 5–July 22, 1967): 49 members, elected on nonpartisan ballot.

Education: *School enrollment* (1965–66)—public elementary, 199,000 pupils (9,000 teachers); public secondary, 124,500 pupils (6,300 teachers); nonpublic schools, 64,100 pupils (2,290 teachers); college and university (fall 1965), 49,805 students. *Public school expenditures* (1965–66)—$131,000,000 ($423 per pupil); average teacher's salary, $5,225.

Public Finance (fiscal year 1965): *Revenues,* $242,298,000 (total sales and gross receipts tax, $65,690,000; motor fuel tax, $47,537,000; federal funds, $70,873,000). *Expenditures,* $237,538,000 (education, $54,609,000; health, welfare, and safety, $52,248,000; highways, $88,429,000). *State debt,* $41,487,000 (fiscal 1965).

Personal Income (1966): $4,181,000,000; average annual income per person, $2,905.

Public Assistance (fiscal year 1967): $32,607,284 to 37,893 recipients (aged, $6,133,852; dependent children, $6,935,251).

Labor Force (employed persons, July 1966): Agricultural, 156,000; nonagricultural (wage and salary earners), 437,500 (17.7% manufacturing, 24.9% trade, 20.4% government). *Unemployed persons* (July 1966)—16,400.

Manufacturing (1965): Value added by manufacture, $870,155,000 (transportation equipment, $35,739,000; primary metals, $43,513,000; nonelectrical machinery, $68,128,000; electrical machinery, $73,821,000; fabricated metals, $54,161,000; food and products, $338,303,000).

Agriculture (1966): *Cash farm income,* $1,855,832,000 (livestock, $1,138,666,000; crops, $541,761,000; govt. payments, $175,405,000). *Chief crops* (tons)—Sorghum grain, 4,139,520 (ranks 2d among the states); wheat, 3,092,250 (rank 3rd).

Mining (1966 est.): *Production value,* $75,984,000. *Chief minerals* (tons)—sand and gravel, 11,500,000; stone, 4,198,000; clays, 141,000; crude petroleum, 13,980,000 barrels; natural gas, 9,200,000,000 cubic feet.

Fisheries (1965): *Commercial catch,* 412,000 pounds ($39,000).

Transportation: *Roads* (1967), 103,195 miles (166,041 km); *motor vehicles* (Aug. 1967), 798,573; *railroads* (1967), 3,908.28 track miles (6,288 km); *airports with scheduled service* (1967), 14.

Communications (1966): *Telephones,* 710,600; *television stations,* 19; *radio stations,* 59; *newspapers,* 20.

increased retirement pensions and gave collective bargaining rights to teachers; established a drug and narcotics control unit, a clean waters commission, and a department of economic development; and increased aid to dependent children.

Education. The broadened tax base made possible additional legislation to provide for state financial assistance to junior colleges and public elementary and secondary schools. The legislature also enacted a law clearing the way for a merger of the Municipal University of Omaha with the University of Nebraska, subject to the approval of Omaha voters.

University of Nebraska enrollment reached an all-time high of 18,067. Major building projects completed at the university in 1967 included a college of dentistry, a music building, and three student residence halls.

Centennial. A number of counties and communities published local histories to mark the centennial year of Nebraska's statehood. The Nebraska State Historical Society, the Joslyn Art Museum, and the University of Nebraska collaborated in preparing a traveling historical exhibit that was seen by more than 100,000 persons.

The Stuhr Museum of the Prairie Pioneer, designed by architect Edward Durell Stone, was dedicated at Grand Island in 1967. The State Historical Society reconstruction of the Fort Robinson Guard House and the Kennard House in Lincoln both neared completion during the year.

Flood. The Wood River overflowed at Grand Island in mid-June after 22 consecutive days of rain and 10 nights of violent storms. Governor Tiemann declared a state of emergency and sent National Guard troops into the area to aid the 5,000 flood refugees. One third of the city, which has a population of 28,600, was under water at the height of the flood.

Agriculture. Nebraska's agricultural production fell slightly in 1967, the result of a late freeze and several weeks of below-average rainfall. Nevertheless, feed grain production for the year was the second highest in the state's history. Cash receipts for livestock production showed a slight rise over the previous year. Total cash receipts in agriculture showed a decline, however, due more to reduced farm prices than to decreased production.

DONALD F. DANKER
Washburn University, Topeka

NECROLOGY, 1967. See the selected listing of prominent persons who died in 1967 on pages 757–768. Separate biographies of certain prominent persons appear under their own headings in this volume.

NEPAL

King Mahendra Bir Bikram Shah Deva continued his vigorous experimentation with "Panchayat Democracy," based on four tiers of panchayats (assemblies), by formulating new interpretations and by changing many of his junior ministers in 1967. In January he amended the 1962 constitution for the first time, affirming his full discretionary powers over the appointment of ambassadors, zonal commissioners (heads of district administration), and the commander in chief of the army.

"Back to the Village." In September, King Mahendra asked the National Panchayat to offer its verdict on the suitability of the panchayat-based political system for the country. A week after the expected endorsement by the National Panchayat, King Mahendra proclaimed a new political movement under the slogan, "Back to the Village." The aims of the new campaign are to publicize the programs of the government among the villagers and to require popular representatives to spend two weeks every year in the villages, bringing instruction and "living like local inhabitants."

NEPAL • Information Highlights

Area: 54,362 square miles (140,797 sq km).
Population: 10,294,000 (July 1, 1966 est.).
Chief Cities (1961 census): Katmandu, the capital, 122,507; Lalitpur, 48,776; Bhaktapur, 37,075.
Government: *King*—Mahendra Bir Bikram Shah Deva (acceded 1955); *Prime Minister*—Surya Bahadur Thapa (took office Jan. 26, 1965). *Parliament*—National Panchayat.
Religious Faiths: Hinduism and Buddhism.
Education: *Literacy rate* (1964), 12% of population. *Total school enrollment* (1964)—397,548 (primary, 334,000; secondary, 54,850; teacher-training, 428; technical, 1,785; higher, 6,485).
Finance (1966–67 est.): *Revenues*, $45,500,000; *expenditures*, $71,900,000; *monetary unit*, rupee (10.125=U. S.$1 as of Dec. 11, 1967).
Crops (metric tons, 1965–66 crop year): Rice, 2,207,000; jute, 39,000.
Foreign Trade (1966 est.): *Exports*, $75,000,000 (chief exports: rice, other food grains, ghee, jute and jute products, oilseeds, timber); *imports*, $95,000,000 (chief imports: cement, foodstuffs, petroleum products, pharmaceuticals, textiles).
Transportation: *Roads* (1965), 300 miles (483 km); *motor vehicles* (1964), 3,662; *railways* (1965), 63 miles (101 km); *civil airline*, Royal Nepal Airlines.

Land Reform and Food Production. The government continued to carry out its 1964 land reform plan by prescribing limits on landholdings, securing the tenancy rights of the peasants, and redistributing land among the landless peasants. Agricultural production, however, failed to show any significant rise, and food was reported to be scarce in various parts of the country during the year. Population continued to rise at an estimated annual rate of 2½%.

Foreign Aid and Economy. Foreign aid continued to be a critical factor in Nepal's economy. It accounted for nearly one third of the government's total expenditure of $64,710,000 for 1966–67. The principal sources of foreign aid were India, the United States, Communist China, and the USSR. The Indian-financed Trisuli hydroelectric project was completed in February, and the Communist Chinese-built Katmandu-Tibet highway was finished in May.

Nepal's exports to countries other than India registered a 60% rise over the 1966 level. The circulation of Nepali currency became universal throughout the country.

Foreign Relations. King Mahendra and Queen Ratna arrived in Washington on November 1 to begin a 10-day state visit to the United States. Crown Prince Birendra arrived at Harvard University in September for a year of study.

BHUWAN L. JOSHI
Cowell College, University of California

NETHERLANDS

Politics played an important role in the Netherlands in 1967. General elections were held early in the year (February 15), with the results dictating a coalition cabinet once more. A new government was finally formed on April 3.

General Elections. More than 7.5 million Netherlanders voted for 150 members of the lower house of the Staten-Generaal (States General, or parliament) on Feb. 15. For the first time the voting age was lowered from 23 to 21 years. The campaign had been lively, the issues reflecting the social and economic problems facing the country. A new party, Democrats 66, which won seven seats, called for an end to the system of proportional representation.

Following the elections, caretaker premier Jelle Zijlstra chose to accept the governorship of the Bank of the Netherlands rather than the premiership. Barend W. Biesheuvel tried to form a government based on the Roman Catholic, the Liberal (People's Party for Freedom and Democracy), and the two leading Protestant parties. He was unable to do so, but on April 3, 47 days after the elections, Petrus J. S. de Jong, a former naval officer, succeeded in forming a right-of center coalition of the same parties. The new government was sworn in the next day. Recurring difficulties in forming cabinets have led to demands for electoral reform.

Economy. A faltering economy prompted the new government to cut expenditures in all departments in order to restore a balance between government spending and the growth of the economy; but reduced public spending caused the steadily rising unemployment to become acute in some areas. Dutch labor is not mobile, and high unemployment benefits do not encourage mobility. Any national program of additional spending to create jobs tends to accelerate inflationary trends.

A key problem is that of wages. Rapid industrialization and prosperity came after World War II when Dutch wages were below those in most European countries. Sharp increases in wages since 1964 have made Dutch exports less competitive in the world market and have reduced profit margins. Because of declining profits, industrial investment has come to a halt.

UPI

PRINCESS BEATRIX of the Netherlands displays her son, Willem Alexander, the new Prince of Orange, born April 27.

The budget is based on anticipated wage increases of no more than 5% in 1968, but it is doubtful whether this line can be held. Contracts of 75% of the labor force must be negotiated by early 1968, and there were rumors of demands for 7% and 8% increases. There has been a complete breakdown in the government's control over wages. Any collective agreement on wages carrying excessive wage increases can be voided by the government, but this is no longer politically and economically feasible.

National Events. Princess Margriet Francisca, the third daughter of Queen Juliana and second in line of succession, was married on January 10 to Pieter van Vollenhoven, a commoner.

On April 27, Crown Princess Beatrix gave birth to a son, Willem Alexander, the first Prince of Orange in line of succession since 1884.

NETHERLANDS • Information Highlights

Area: 12,978 square miles (33,612 sq km).

Population: 12,573,000 (May 1, 1967 est.).

Chief Cities (1965 est.): Amsterdam, the capital, 864,940; Rotterdam, 731,315; The Hague, 596,686; Utrecht, 268,583.

Government: Queen—Juliana (b. 1909; acceded, 1948); *Premier*—Petrus J. S. de Jong (took office April 4, 1967). *Parliament*—(Staten-Generaal):—First Chamber, 75 members (party seating, 1966: Catholic People's party, 26: Labor party, 24; Anti-Revolutionary party, 7; Christian Historical Union, 7; others, 11); Second Chamber, 150 deputies (party seating, 1967: Catholic People's party, 42; Labor party, 37; People's party for Freedom and Democracy, 17; Anti-Revolutionary party, 15; Christian Historical Union, 12; Farmers' party, 7; Communist party, 5; others, 15).

Religious Faiths: Protestants, 43% of population; Roman Catholics, 38.5%; Jews, 0.1%; others, 18.4%.

Education: *Literacy rate* (1962), 99% of population. *Total school enrollment* (1964)—2,611,555 (primary, 1,397,795; secondary, 521,951; teacher-training, 9,602; technical, 545,429; higher, 136,778).

Finance (1967 est.): *Revenues*, $5,115,000,000; *expenditures*, $5,355,000,000; *public debt* (1966), $6,408,900,000; *monetary unit*, guilder (3.62 guilders equal U. S.$1).

Gross National Product (1966): $20,754,000,000.

National Income (1966): $16,958,700,000; average annual income per person, $1,362.

Economic Indexes (1966): *Industrial production*, 173 (1958=100); *agricultural production* (1965), 137 (1956–57=100); *cost of living*, 133 (1958=100).

Manufacturing (metric tons, 1966): Crude steel, 3,264,000; cement, 3,168,000; gasoline (1965), 2,923,000.

Crops (metric tons, 1966): Potatoes, 4,124,000; sugar beets, 3,645,000; wheat, 597,000; barley, 416,000.

Foreign Trade (1966): *Exports*, $6,751,000,000 (chief exports, 1965: electrical machinery, $623,000,000; textile yarn and fabrics, $461,000,000; petroleum products, $427,000,000); nonelectrical machinery, $387,000,000); *imports*, $8,017,000,000 (chief imports, 1965: crude and partly refined petroleum, $461,475,000; automobiles, $441,395,000). *Chief trading partners* (1965): West Germany (took 28% exports, supplied 23% of imports); Belgium-Luxembourg (took 15% of exports, supplied 19% of imports).

Transportation: *Roads* (1964), 54,400 miles (87,546 km); *motor vehicles* (1965), 1,526,600; *railways* (1964), 2,023 miles (3,256 km); *merchant vessels* (1966), 469 (4,451,000 gross registered tons); *national airline*, Royal Dutch Airlines (KLM); *principal airports*, Amsterdam, Rotterdam.

Communications: *Telephones* (1966): 2,382,225; *television stations* (1967), 13; *television sets* (1967), 2,630,000; *radios* (1965), 3,093,000; *newspapers* (1965), 88.

NETHERLANDS INFORMATION SERVICE

Prime Minister Petrus J. S. de Jong of the Netherlands.

PETRUS J(OSEF) S(IETSE) DE JONG, premier and minister of general affairs of the Netherlands, whose Catholic People's party retained its parliamentary plurality in the national elections of Feb. 15, 1967, formed a new government on April 3, after two previously designated premiers had failed in efforts to establish a stable coalition government. In May, de Jong attended the Rome summit meeting of member nations of the European Economic Community.

De Jong was born in Apeldoorn on April 3, 1915. He attended the Royal Dutch naval college and entered the Dutch Navy in 1931. After receiving his commission in 1934, he served on submarines and destroyers in domestic waters, the Caribbean, and the Far East. During World War II he was a submarine commander. In 1958 he became the commander of the destroyer *Gelderland*. He served as secretary of defense from 1963 until his appointment as premier.

On January 2, after a campaign of more than 10 years, advertising commercials appeared on Dutch television.

Foreign Affairs. At the celebration of the 20th anniversary of the Marshall Plan in June, Prince Bernhard, consort of Queen Juliana, presented Harvard University with a fund of $200,000 for an annual lectureship on Netherlands culture and civilization as a token of gratitude for Marshall Plan aid to the Netherlands after World War II.

Foreign Minister Joseph M. A. H. Luns, speaking in the UN General Assembly on October 3, proposed adoption of an international development charter pledging rich and poor countries alike to a coordinated attack on poverty. At the same time he announced that the parliament of the Netherlands had been asked to approve an appropriation of $149 million for foreign aid in 1968, $24 million more than in 1967. A 4-year plan provides for increasing aid to a total of 1% of the gross national income.

On October 30, Prince Bernhard received the Nansen Medal for 1967 in recognition of his direction of a campaign that raised $18 million in 1966 for refugees in Asia and Africa.

The Netherlands, West Germany, and Belgium are joining in a $100 million commercial project to build a fast-breeder nuclear reactor capable of generating 300 megawatts of electric power.

AMRY VANDENBOSCH
University of Kentucky

NEVADA

The year 1967 was a quiet year in Nevada politics. Attention was centered on the activities of the 54th state legislature which, in its regular session imposed one of the biggest tax increases in the history of the state.

In the first major change in Nevada's gambling tax to be made since 1957, the legislature passed a bill in January which increased the gambling tax by 20%. Gov. Paul Laxalt had asked the legislators to increase the tax by 25%. The state sales tax, Nevada's chief source of revenue, which accounted for $23,366,324 in the fiscal year 1966–67, was increased from 2% to 3%. The extra 1% will be returned to the counties of origin, earmarked for public school support.

Other Legislation. In accordance with a directive of the federal courts, the Nevada legislature reapportioned itself for the 1967 session. Measures were passed to make urban renewal projects subject to voter approval, legalize election day liquor sales, and restrict the activities of persons without religious affiliations who officiate at commercial wedding chapels in the state. Medical aid for the poor was granted under the national Medicaid program.

Economic Developments. The rate of mineral production in 1966 was one of the highest on record for Nevada, exceeded only by production in 1955 and 1956, when the federal government was particularly active in the market. Gross production of copper was valued at nearly $57 million; gold, $12 million; sand and gravel, $9 million; iron ore, $4 million; and stone, $2 million. Producers of gold enjoyed a banner year, with production up almost $5 million over the $8 million of the previous year. Titanium Metals Company at Henderson planned to spend $15 million on plant expansion in fiscal 1968. Nevada's lithium resources, vital in the production

NEVADA • Information Highlights

Area: 110,540 square miles (286,299 sq km).
Population: 444,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Carson City, the capital, 7,400; Las Vegas, 110,000; Reno, 68,000; North Las Vegas, 30,500.
Government: *Chief Officers*—governor, Paul Laxalt (Republican); lt. gov., Ed Fike (R); secy. of state, John Koontz (Democrat); atty. gen., Harvey Dickerson, (D); treas., Michael Mirabelli; supt. of pub. instr., Burnell Larson; chief justice, Gordon Thompson. *Legislature*—Nevada Legislature (met Jan. 16–April 15, 1967): Senate, 20 members (9 Republicans, 11 Democrats); Assembly, 40 members (19 R, 21 D).
Education: *School enrollment* (1965–66)—public elementary, 87,000 pupils (2,630 teachers); public secondary, 51,000 pupils (1,850 teachers); nonpublic schools, 4,500 pupils (140 teachers); college and university (fall 1965), 8,039 students. *Public school expenditures* (1965–66)—$53,500,000 ($535 per pupil); average teacher's salary, $6,900.
Public Finance (fiscal year 1967): *Revenues*, $154,246,343 (2% sales tax, $23,366,324; motor fuel tax, $16,333,645). *Expenditures*, $155,935,446 (education, $38,674,144; health, welfare, and safety, $20,018,495; highways, $63,232,724). *State debt*, $8,812,000 (June 30, 1967).
Personal Income (1966): $1,507,000,000; average annual income per person, $3,497.
Public Assistance (fiscal year 1967): $5,762,300 to 9,949 recipients (aged, $2,462,900; dependent children, $2,550,200).
Labor Force (employed persons, July 1967): *Agricultural*, 6,300; *nonagricultural* (wage and salary earners), 171,900.
Manufacturing (1965): Value added by manufacture, $106,897,000 (lumber and wood products, $2,374,000; concrete and plaster products, $16,135,000; printing and publishing, $12,759,000).
Agriculture (1966): *Cash farm income*, $64,538,000 (livestock, $52,179,000; crops, $10,818,000; govt. payments, $1,541,000). *Chief crops* (tons)—hay, 675,000; wheat, 26,190.
Mining (1966 est.): *Production value*, $111,823,000. *Chief mineral* (tons)—sand and gravel, 7,231,000.
Transportation: *Roads* (1967), 46,779 miles (75,267 km); *motor vehicles* (1966), 351,928; *railroads* (1966), 2,046 track miles (3,293 km); *airports* (1965), 46.
Communications: (1966): *Telephones* (1967), 236,700; *television stations*, 5; *radio stations*, 24; *newspapers*, 8.

of the hydrogen bomb, were being commercially developed during the year.

Gambling casinos in the state grossed $357,987,971 in fiscal 1967, of which the state received $22,108,640. In 1966, gross farm income reached a record high of $68,797,000, showing an increase of more than $10 million over 1966.

Building. New hotels rose in the ever-expanding Las Vegas area in 1967. Other construction in the area during the year included the development of a resort community of 18,000 homes near Lake Mead and a 105,000-acre mixed complex at Eldorado Valley. The latter may become a $400 million project. The ultramodern Pioneer Theater-Auditorium in Reno was turned over to the city in mid-November, 45 days ahead of its scheduled completion.

Water Supply. Reversing the situation that existed in 1966, Nevada's water supply rose in 1967 to 169% of the preceding 15-year average.

Arthur J. Palmer, Jr.
Nevada Legislative Counsel Bureau

NEW BRUNSWICK

Premier Louis Robichaud's controversial reform program, the Plan for Equal Opportunity, took effect on Jan. 1, 1967. The primary aim of the program was to bring many previously local services under provincial control. County councils were abolished and the province assumed complete control over education, health and welfare, and the administration of justice. The former 350 school districts were reduced to 30, and 1-room schools were abolished. A property tax of $1.50 per $100 of valuation was imposed, and the sales tax was doubled to 6%.

Provincial Election. The program of the Liberal government won a vote of confidence from the voters on October 23, after one of the bitterest election campaigns in the province's recent history. The Conservative party had chosen as its leader J. Charles Van Horne, a boisterous and colorful politician, who stirred his party's hopes by winning a by-election in Restigouche county on February 23. But after an exciting session of the legislature, dominated by a contest between Van Horne and Premier Robichaud, the Liberals won by capturing 32 seats ot the Conservatives' 26.

The element of surprise in the vote was that Van Horne lost Restigouche. At the end of the year the political atmosphere was charged with tension and expectancy, and the future of Charles Van Horne was the principal subject of discussion.

Economy. The completion of the hydroelectric installation at Mactaquac, 12 miles above Fredericton on the St. John River, was the major construction project in the Maritime provinces. Ultimately the dam will generate 600,000 kilowatts of electricity and will provide the province with a power surplus that, it is hoped, will attract new industry.

Much of the new power generated is transmitted to the Bathurst-Belledune mining-smelting complex in the northern part of the province. The creation of a 59-mile-long lake behind the dam resulted in the building of new roads and bridges. A new pioneer village and other features have been planned to attract tourists, who have provided a stimulus to the whole industry of central New Brunswick. Construction of a new paper mill was begun at Nackawick, on the shores of the new lake. Financed by New York investors, it will employ 400 persons, for whom a new town was planned.

NEW BRUNSWICK • Information Highlights

Area: 28,354 square miles (73,437 sq km).
Population: 616,788 (1966 census).
Chief Cities (1966 census): Fredericton, the capital, 22,460; St. John, 51,567; Moncton, 45,847.
Government: *Chief Officers*—lt. gov., John B. McNair; premier, Louis J. Robichaud (Liberal); prov. secy., Joseph E. LeBlanc (L); atty. gen., Bernard A. Jean (L); prov. treas., L. G. DesBrisay (L); min. of educ., W. W. Meldrum (L); chief justice, G. F. G. Bridges. *Legislature*—Legislative Assembly (convened March 14–May 19, 1967): 51 members (31 Liberal, 20 Conservative).
Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 164,124 pupils (6,577 teachers); private schools, 1,791 pupils (135 teachers); Indian (federal) schools, 686 pupils (25 teachers); college and university (fall 1966), 6,862 students. *Public school expenditures* (1963)—$35,996,000 ($251 per pupil); average teacher's salary (1964–65 est.), $4,117.
Public Finance (fiscal year 1967 est.): *Revenues*, $143,940,000 (sales tax, $41,100,000; income tax, $20,692,000; federal funds, $49,139,000). *Expenditures*, $146,340,000 (education, $25,540,000; health and social welfare, $38,340,000; transport and communications, $35,810,000).
Personal Income (1966 est.): $925,000,000; average annual income per person, $1,475.
Public Assistance (fiscal year 1967 est.): $8,690,000 (chiefly to the aged and blind, $3,550,000; dependents and unemployed, $3,480,000).
Manufacturing (1964): Value added by manufacture, $188,990,000 (paper and allied industries, $56,719,000; wood industries, $20,558,000; printing and publishing industries, $6,778,000; fabricated metals, $9,572,000; food and beverages, $50,810,000).
Agriculture (1966 est.): *Cash farm income*, $54,473,000 (livestock, $30,649.000; crops, $21,036,000; govt. payments, $1,388,000). *Chief crops* (cash receipts)—potatoes, $16,441,000 (ranks 2d among the provinces); fruits, $2,007,000 (ranks 5th); vegetables, $1,217,000.
Mining (1966 est.): *Production value*, $89,371,139. *Chief minerals* (short tons)—zinc, 146,199 (ranks 3d among the provinces by value); lead, 47,999 (ranks 3d); coal, 900,000 (ranks 3d); silver, 3,025,094 troy ounces (ranks 5th).
Fisheries (1966): *Commercial catch*, 335,417,000 pounds ($10,988,000). *Leading species*—lobster, 6,121,000 pounds ($3,444,000); herring, 231,265,000 pounds ($2,811,000).
Transportation: *Roads* (1965), 13,939 miles (22,428 km); *motor vehicles* (1965), 174,428; *railroads* (1966), 1,671 track miles (2,689 km); *licensed airports* (1966), 10.

A minor shock was caused by the take-over of Brunswick Mining and Smelting, the largest corporation of its kind in the province, by Noranda Mines because of the need for fresh and abundant capital. Although the growth of the provincial economy was satisfactory in 1967, it fell somewhat short of the rate for Canada as a whole. Personal income was $1,475 compared with the national figure of $2,144.

W. S. MacNutt
University of New Brunswick

NEW HAMPSHIRE

Events in New Hampshire in 1967 were highlighted by a quietly productive session of the state legislature and the November municipal elections. The elections, which provided further evidence of the decline of straight party voting in the state, produced several major upsets.

In its regular session the New Hampshire legislature won mixed reviews for the adequacy of its responses to demands for improvements in education, tax reform, and antipollution control. As in previous sessions, attempts to enact a broadly based tax were decisively defeated. Expanded state budget requirements prompted the passage, however, of a controversial 5% rooms-and-meals-tax. This was expected to generate $9.2 million in revenue over the biennium, of which $3.7 million would be returned to the towns and cities on a per capita population basis to ease the property tax burden. In addition, the legislature increased the tobacco tax by 2 cents per pack of cigarettes.

Other Legislation. Among the major accomplishments of the 1967 session were the consolidation of the state's four major retirement systems for state employees, teachers, firemen, and policemen; a 6% pay increase for state employees; and improvements, including benefit increases, in unemployment compensation and workmen's compensation laws. Other measures included raises in the state hourly minimum wage to match federal law; the imposition of new restrictions on small loans; passage of a "right-to-know" law, guaranteeing public access to the meetings and records of public agencies; and the creation of a new department of centralized automated data processing. The legislators also established the position of a state poet laureate, to be appointed by the governor and council.

Pollution Control. In response to the Federal Water Quality Act of 1965, the legislature enacted revised classification standards for public waters in the state, to be implemented under a new water supply and pollution control committee. Concern over the effects of environmental pollution was also reflected in the establishment of a new air pollution commission.

Elections. Incumbent Republican mayors were defeated in November by Democratic challengers in the cities of Rochester and Franklin. In two other municipal elections, however, the Republicans scored notable successes. In Manchester, the state's largest city, former Republican mayor John C. Mongan won a narrow victory over the Democratic incumbent, Roland S. Vallee. In heavily Democratic Somersworth, Clyde R. Coolidge, a 28-year-old political novice, staged a startling upset by winning election as the city's first Republican mayor in 64 years.

Sweepstakes. New Hampshire sweepstakes sales for 1967 closed on September 10 with total receipts of $2.5 million, a sharp decline of $1.2 million from 1966. On October 6 the state supreme court ruled unconstitutional a law, enacted by the 1967 legislature, allowing funds from the state-operated sweepstakes to be distributed to parochial as well as to public schools. In a 4-1 decision, the court ruled that the law violated the principle of separation of church and state.

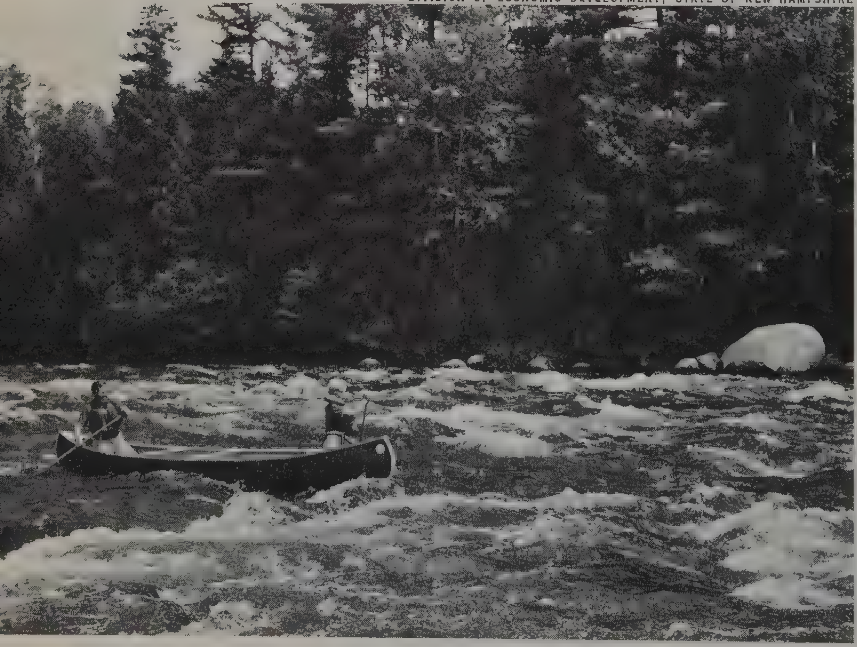
Conservation. New Hampshire conservationists won a notable victory in the summer of 1967 when the U. S. Army Corps of Engineers recommended against a proposed multipurpose dam on the Androscoggin River. The dam would have flooded 7,000 acres of wilderness area.

JOSEPH P. FORD
University of New Hampshire

NEW HAMPSHIRE • Information Highlights

Area: 9,304 square miles (24,097 sq km).
Population: 685,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Concord, the capital, 29,500; Manchester, 89,500; Nashua, 43,500; Portsmouth, 28,000; Dover, 21,000; Keene, 18,700; Berlin, 17,000.
Government: *Chief Officers*—governor, John W. King (Democrat); secy. of state, Robert L. Stark (Republican); atty. gen., George S. Pappagianis (D); treas., Robert W. Flanders; commissioner of education, Paul E. Farnum; chief justice, Frank R. Kenison. *Legislature—General Court* (met. Jan. 4–July 1, 1967; convenes Jan. 1, 1969): Senate, 24 members (14 Republicans, 10 Democrats); House of Representatives, 400 members (245 R, 155 D).
Education: *School enrollment* (1965–66)—public elementary, 86,050 pupils (3,075 teachers); public secondary, 46,610 pupils (2,275 teachers); nonpublic schools, 39,100 pupils (1,760 teachers); college and university (fall 1965), 20,480 students. *Public school expenditures* (1965–66)— $56,571,000 ($469 per pupil); average teacher's salary, $5,650.
Public Finance (fiscal year 1967): *Revenues,* $246,626,163 (state tax, $61,389,984; motor fuel tax, $18,700,436; federal funds, $33,301,422). *Expenditures,* $251,393,697. *State debt,* $131,591,000 (June 30, 1967).
Personal Income (1966): $1,901,000,000; average annual income per person, $2,808.
Public Assistance (fiscal year 1967): $11,440,785 to 14,141 recipients (aged, $6,117,907; dependent children, $3,233,679).
Labor Force (employed persons, June 1967): *Agricultural,* 5,620; *nonagricultural* (wage and salary earners), 249,490 (40% manufacturing, 18% trade, 13% government). *Unemployed persons* (June 1967)—5,500.
Manufacturing (1965): Value added by manufacture, $770,940,000 (leather and leather products, $110,319,000; primary metals, $20,634,000; nonelectrical machinery, $113,458,000; electrical machinery, $132,535,000).
Agriculture (1966): *Cash farm income,* $58,919,000 (livestock, $46,611,000; crops, $11,661,000; govt. payments, $647,000). *Chief crops* (tons)—hay, 226,000; maple syrup, 354.
Mining (1966): *Production value,* $7,000,000. *Chief minerals* (tons)—sand and gravel, 7,626,000; stone, 206,454.
Fisheries (1965): *Commercial catch,* 1,272,500 pounds ($636,725). *Leading species*—northern lobsters, 765,000 pounds ($550,800); alewives, 125,000 pounds ($1,875).
Transportation: *Roads* (1967), *14,538 miles* (23,392 km); *motor vehicles* (1967), 342,696; *railroads* (1967), 1,015 track miles (1,633 km); *airports* (1967), 5.
Communications (1967): *Telephones* (1966), 295,800; *television stations,* 3; *radio stations,* 19; *newspapers,* 9.

DIVISION OF ECONOMIC DEVELOPMENT, STATE OF NEW HAMPSHIRE



ANDROSCOGGIN RIVER, which provides a sporting canoe course through some of the most scenic parts of northern New Hampshire, made conservation news in 1967 when the U. S. Army Corps of Engineers recommended against a proposal to dam it.

NEW JERSEY

After years of unfulfilled predictions of violence, major racial conflict finally broke out in the city of Newark in mid-July 1967. Other events of the year included the U. S.-Soviet summit conference at Glassboro in June and a Republican sweep of the state legislature in the November elections.

Newark Riot. The arrest and alleged police beating of a Negro taxicab driver on July 12 sparked demonstrations that evening at a precinct police station and City Hall. When besieged police officers charged the crowd gathered at the police station the next evening, large-scale rioting and looting ensued. Following requests for assistance from Mayor Hugh J. Addonizio in the early morning hours of July 14, state police and National Guard troops were ordered into the city by Gov. Richard J. Hughes, who arrived to assume personal command. Before the governor announced restoration of order on July 17, the riot had spread over a two-square-mile area of the city and resulted in more than 20 deaths and injuries to hundreds.

Contributing to the atmosphere in which the riot occurred were controversies over the appointment of a new secretary of the board of education (the competing candidates being a Negro and a white); the proposed destruction of numerous ghetto homes to provide land for a state college of medicine and dentistry; and reports of agitation by militants among the Negro population. (See also Civil Rights.)

NEW JERSEY • Information Highlights

Area: 7,836 square miles (20,295 sq km).
Population: 7,004,000 (July 1, 1967, est.).
Chief Cities (1965 est.): Trenton, the capital, 107,000; Newark, 395,000; Jersey City, 270,000; Paterson, 144,000; Elizabeth, 114,000; Camden, 112,500; Clifton, 85,000.
Government: *Chief Officers*—governor, Richard J. Hughes (Democrat); secy. of state, Robert J. Burkhardt (D); atty. gen., Arthur J. Sills (D); treas., John A. Kervick; commissioner of education, Carl Marburger; chief justice, Joseph Weintraub. *Legislature*—(convened Jan. 10, 1967): Senate, 29 members (7 Republicans, 17 Democrats, 5 vacancies); General Assembly, 60 members (17 R, 40 D, 3 vacancies).
Education: *School enrollment* (1965–66)—public elementary, 881,000 pupils (35,000 teachers); public secondary, 445,000 pupils (24,000 teachers); nonpublic schools, 334,200 pupils (10,450 teachers); college and university (fall 1965), 129,684 students. *Public school expenditures* (1965–66)—$787,000,000 ($662 per pupil); av. teacher's salary, $6,968.
Public Finance (fiscal year 1967): *Revenues*, $1,235,733,920 (3% sales tax, $208,311,756; motor fuel tax, $148,458,556). *Expenditures*, $1,407,761,275. *State debt*, $292,816,000.
Personal Income (1966): $23,767,000,000; average annual income per person, $3,445.
Public Assistance (fiscal year 1967): $142,089,075 to 192,960 recipients (aged, $13,111,713; dependent children, $78,754,880).
Labor Force (employed persons, annual average 1966): *Agricultural*, 36,300; *nonagricultural* (wage and salary earners), 2,352,700 (37.2% manufacturing, 19.5% trade, 13.2% government). *Unemployed persons* (annual average 1966)—122,600.
Manufacturing (1965): Value added by manufacture, $11,231,732,000 (transportation equipment, $710,236,000; primary metals, $521,816,000; nonelectrical machinery, $837,822,000; electrical machinery, $1,478,323,000; fabricated metals, $755,028,000; food and products, $1,058,716,000).
Agriculture (1966): *Cash farm income*, $278,921,000 (livestock, $126,537,000; crops, $147,542,000; govt. payments, $4,842,000). *Chief crops* (tons)—cranberries, 7,200 (ranks 3d among the states); hay, 338,000; potatoes, 165,600; corn for grain, 68,264; apples, 52,800; peaches, 33,600.
Mining (1966): *Production value*, $75,595,000. *Chief minerals* (tons)—sand and gravel, 17,782,000; stone, 12,453,000; clays, 488,000; peat, 36,312; zinc, 25,237.
Fisheries (1966): *Commercial catch*, 97,333,101 pounds ($9,756,808). *Leading species*—surf clams, 43,173,829 pounds ($3,714,103); menhaden, 12,900,653 pounds ($263,478); scup, or porgy, 4,295,289 pounds ($581,953); fluke flounders, 3,821,124 pounds ($891,101).
Transportation: *Roads* (1967), 33,160 miles (53,354 km); *motor vehicles* (1966), 3,061,521; *railroads* (1967), 4,607 *track miles* (7,414 km); *airports with scheduled service* (1967), 4.
Communications (1967): *Telephones*, 3,953,600; *television stations*, 1; *radio stations*, 41; *newspapers*, 33 (daily circulation, 1,736,712).

WIDE WORLD

A PLAINFIELD, N. J., house is one of the Negro homes searched in July for stolen carbines and ammunition by National Guardsmen and state police, accompanied by a representative of the Negro community (*top*) as an observer.

Other Disorders. Within the next two weeks, racial disorders spread to other New Jersey communities, the most serious being in Plainfield, Elizabeth, Jersey City, New Brunswick, and Englewood. In Plainfield, a police officer was shot and beaten to death by Negro youths, and the theft of firearms and ammunition from a nearby industrial plant led to a search of homes in the Negro area by police and National Guardsmen.

Investigations and Trials. A special commission established by Governor Hughes to investigate the riots was expected to report in February 1968.

During the riots both the state police and the National Guard were accused of using excessive gunfire to suppress sniper fire directed at them and at fire-fighting personnel in Newark, and there were reports of deliberate destruction in Negro-owned stores that had been spared by rioters and looters. Criticism of the almost completely white National Guard led to special permission from the federal government for recruitment of 750 additional guardsmen from among the Negro population. Only about half this number was reached by the end of 1967.

Trials of about 200 persons indicted in the Newark riots began in September. On November 6 the writer LeRoi Jones was found guilty of illegal possession of firearms in the riot area and later (Jan. 4, 1968) sentenced to 2½–3 years in prison and fined $1,000.

Glassboro Summit Meeting. International attention was focused on the small southern New Jersey town of Glassboro when Holly Bush, the home of the president of Glassboro State College, became the site of two meetings (June 23 and 25) between President Johnson and Premier Kosygin of the Soviet Union. (See also UNITED STATES.)

Reapportionment and Elections. The state constitutional provisions for reapportionment and enlargement of the legislature, which had been approved by the voters in 1966, were implemented early in 1967 by a bipartisan apportionment commission but were challenged immediately in the courts. A succession of judicial decisions sustained the major outlines of the plan while requiring adjustment of details in many parts of the state.

The first election under the new plan was held on November 7, with all seats in both expanded houses up for election. The result was a sweep for the Republicans, who won 31 of the 40 Senate seats and 58 of the 80 General Assembly seats.

Legislative Action. The state budget for the fiscal year ending June 30, 1968, approximated $1 billion, with increases being made in financial aid to local governments and in state operations. New state departments of community affairs and of higher education were established during the year. On December 26, Governor Hughes signed into law a measure aimed at improving housing conditions in New Jersey's migrant farm labor camps.

ERNEST C. REOCK, JR.
Rutgers—The State University

On June 5, 1967, a band of armed raiders laid siege to the Rio Arriba county courthouse at Tierra Amarilla, N. Mex. Accused in the raid and scheduled to go on trial in state court on Jan. 29, 1968, were Reies Lopez Tijerina and 19 of his followers. Tijerina is an out-of-state leader of a group seeking to obtain land under old Spanish land grants. In October 1966 the group had made an armed attempt to seize lands in the Carson National Forest. On Jan. 3, 1968, Eulogio Salazar, a key witness to the raid, was found murdered on a road west of Tierra Amarilla. Tijerina's brother, Cristobal Tijerina, was one of two persons charged with the murder of Salazar, a deputy sheriff who had been injured by gunfire and held hostage during the raid.

The Tijerina "land grant" movement has included demands for 2,500 square miles of land in New Mexico under grants made largely by Spanish viceroys in the 17th and 18th centuries. No claims under those grants have been successfully established since 1904, when a special federal Court of Private Land Claims finished its work. The court was set up by Congress in 1891 to deal with the maze of claims under Spanish and Mexican grants.

S.R.B

NEW MEXICO

The 1967 sessions of the New Mexico legislature were marked by frequent clashes between Republican Gov. David F. Cargo and the Democratic majority of lawmakers. Weather, including a damaging late spring freeze and severe snowstorms in mid-December, also made news during the year.

Legislation. One of the major bills passed by the legislature provided for repeal of the preprimary nominating convention and a return to the direct primary. Another increased the state minimum wage to $1 an hour for service workers and $1.25 for nonservice workers. A conflict of interest law covering state employees was passed. The state gasoline tax was raised to 1 cent. Bills killed in the legislature included those providing for congressional redistricting, abolition of the death penalty, liberalization of abortion laws, and creation of a public defender system for the indigent and an ombudsman program for citizen grievances. In spite of an $186.7 million appropriation bill ($108.5 million of which was designated for education), higher costs in state government resulted in deficit spending and depletion of reserve funds.

Among amendments to the state constitution passed in a special election on November 7 were those permitting the depositing of state funds in savings and loan associations, providing for lease of state lands for development of geothermal energy, creating a judicial standards commission for the discipline or removal of judges, and requiring that voters on special property tax levies be property owners.

The Economy. New Mexico agriculture and livestock production fared worse in 1967 than in 1966, as fields and ranges experienced one of the driest seasons in recent years. Yields were below normal

NEW MEXICO • Information Highlights

Area: 121,666 square miles (315,115 sq km).
Population: 1,003,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Sante Fe, the capital, 40,000; Albuquerque, 242,000; Roswell, 50,000; Las Cruces; 33,500.
Government: *Chief Officers*—governor, David F. Cargo (Republican); lt. gov., E. Lee Francis (R); secy. of state, Ernestine D. Evans (Democrat); atty. gen., Boston E. Witt (D); treas., H. E. Thomas, Jr.; supt. of pub. instr., Leonard Delayo; chief justice, David Chavez, Jr. *Legislature* (convened Jan. 17, 1967)—Senate, 42 members (17 Republicans, 25 Democrats); House of Representatives, 70 members (25 R, 45 D).
Education: *School enrollment* (1965–66)— public elementary, 161,000 pupils (6,000 teachers); public secondary, 120,000 pupils (4,875 teachers); nonpublic, 30,400 pupils (1,070 teachers); college and university (fall 1965), 30,388 students. *Public school expenditures* (1965–66)—$131,000,000 ($524 per pupil); average teachers's salary, $6,415.
Public Finance (fiscal year 1967): *Revenues,* $597,631,045 (general sales and gross receipts tax, $98,406,706; motor fuel tax, $31,328,155; federal funds, $100,164,162). *Expenditures,* $594,224,782 (education, $126,440,173; health, welfare, and safety, $43,375,626; highways, $84,573,661). *State debt,* $42,336,000 (June 30, 1967).
Personal Income (1966): $2,390,000,000; average annual income per person, $2,385.
Public Assistance (fiscal 1966): $27,601,320 to 46,467 cases (aged, $9,952,970; dependent children, $12,373,010).
Labor Force (employed persons, Dec. 1966): *Nonagricultura* (wage and salary earners), 175,742 (10.6% mfg., 33.9% trade, 21% services). *Unemployed persons* (Dec. 1966)—5,719.
Manufacturing (1965): Value added by manufacture, $141,627,000 (printing and publishing, $14,775,000; stone, clay, an glass products, $19,966,000; lumber and wood products $11,012,000; petroleum and coal products, $10,426,000 food and products, $38,744,000).
Agriculture (1966): *Cash farm income,* $327,020,000 (livestock $191,687,000; crops, $97,875,000; govt. payments, $37,458,000). *Chief crops* (tons)—hay, 933,000; sorghum grain 417,960; sweet potatoes, 285,000; wheat, 141,120; cotton seed, 75,000; cotton lint, 43,200; barley, 17,500.
Mining (1966 est.): *Production value,* $812,024,000. *Chie* minerals (tons)—sand and gravel, 11,700,000; potassiu salts, 2,957,000; bituminous coal, 2,810,000; uranium ore 2,095,724; perlite, 347,600; pumice, 281,000; crude petroleum, 123,200 barrels; silver, 295,000 troy ounces.
Transportation: *Roads* (1967), 66,819 miles (107,512 km); *mot* vehicles (1967), 598,529; *railroads* (1966), 2,226 line mile (3,582 km); *airports with scheduled services* (1967), 10.
Communications (1967): *Telephones* (1966), 393,800; *televisio* *stations,* 7; *radio stations,* 58; *newspapers,* 19 (dail circulation, 199,330).

for most crops, except sorghum and corn. Most dryland wheat fields were abandoned. A late spring freeze virtually destroyed the northern area fruit crop. Mineral production continued at a high level, except for a slight decline in potash production and a halt in copper production caused by a nationwide strike of copper workers that began on July 15 and still continued at year's end. Federal funds totaling $24 million were received for water conservation and reclamation projects.

Project Gasbuggy. The first commercial use of thermonuclear energy took place on December 10 at a site in northwestern New Mexico. The purpose of the underground blast, known as Project Gasbuggy, was to assess the possibility of using thermonuclear energy to aid in the recovery of natural gas. (See also ATOMIC ENERGY; GAS.)

Snowstorms. Severe blizzards struck northern and northwestern New Mexico on December 15, stranding motorists on major highways and isolating residents. The National Guard was called out to assist in clearing roads and bringing aid to storm victims, while U. S. Air Force personnel engaged in a massive air operation to bring animal feed, food, and medical supplies to the Navajo Indian Reservation.

MYRA ELLEN JENKINS
New Mexico State Records Center and Archives

NEW ORLEANS

In 1967, Orleans Parish District Attorney Jim Garrison continued his controversial inquiry into the assassination of President John F. Kennedy. The year was marked by investigations into organized crime in both the city of New Orleans (1966 est. pop.: city, 663,850; metropolitan area, 1,053,900) and the state.

Assassination Probe. District Attorney Garrison began investigating the assassination of the late President Kennedy in October 1966. On March 22, Clay L. Shaw, a retired New Orleans businessman, was indicted by a New Orleans grand jury on a charge of conspiring with Lee Harvey Oswald, David W. Ferrie (who was found dead in his apartment in February shortly after his name was brought into the investigation), and others in a plot to assassinate President Kennedy. In the first trial to arise from the investigation, local attorney Dean Adams Andrews, Jr., was convicted of perjury on August 14 for his testimony concerning a mysterious man named Clay Bertrand, whom Garrison identified with Shaw. Andrews appealed the conviction, and Shaw was awaiting trial. In December, Garrison implicated another figure in the alleged plot when he filed a conspiracy charge against Edgar Eugene Bradley, a former Los Angeles businessman.

Garrison contended that Kennedy was assassinated by a group of 15 men, including anti-Castro adventurers, well trained in guerrilla tactics. Both CBS and NBC television, as well as several national magazines, have been critical of the probe.

Crime. An article in *Life* magazine on alleged organized crime in New Orleans touched off an investigation by the Orleans Parish grand jury. Garrison firmly denied the existence of organized crime in the city. The New Orleans Metropolitan Crime Commission, a local voluntary citizens group, resisted the subpoena of its records and accused the district attorney of harassment.

Election. Ernest N. Morial, a young New Orleans attorney, became the first Negro in nearly 90 years to be elected to the Louisiana House of Representatives from District 20 in New Orleans. He defeated the incumbent Stephen Daley on November 5.

City Government. In September, in a move designed to aid the city's Negro population, the city council created by ordinance a Human Relations Committee to be supported by an annual appropriation of $75,000. About 39% of the city's population is Negro.

Sports. The National Football League came to New Orleans in September when the New Orleans Saints opened their first season in Tulane University's Sugar Bowl. A 67-acre site in the center of the city has been designated for the construction of a domed stadium. The New Orleans Buccaneers, enfranchised by the American Basketball Association, inaugurated their first season at the Loyola University fieldhouse.

Economy. The city's economy showed mixed gains in the first half of 1967. While there was a decline in the construction industry during the year, New Orleans' Avondale Shipyards registered solid gains. Fulfillment of $450 million in contracts for new ships and other maritime work resulted in the employment of 7,000 persons.

WILLIAM W. SHAW
Tulane University

NEW YORK

A proposed new state constitution and fiscal and racial problems commanded the attention of New Yorkers in 1967.

Constitutional Issue. New York's first constitutional convention in 29 years began the task of rewriting the state's basic charter on April 4, 1967. The delegates, who had been elected in November 1966, chose Assembly Speaker Anthony J. Travia, a Democrat, as president of the convention.

In one of its first major acts, the convention turned down court reform plans supported by U.S. Sen. Robert F. Kennedy. The most emotional and controversial issue facing the delegates was the fate of the Blaine Amendment, a 73-year-old constitutional provision barring financial aid to church-supported schools. After sharp debate, the convention voted to repeal this ban and to substitute the language of the first amendment of the U. S. Constitution.

Among other proposals approved by the delegates were: the creation of a 5-member commission to take reapportionment out of the hands of the legislature; the assumption by the state of the costs of running the statewide court system and local welfare operations; a "conservation bill of rights" requiring the legislature to provide for the reduction of air and water pollution; and a new civil rights bill, including stricter controls on police wiretapping and the granting of jury trials for misdemeanors in New York City.

Over strong Republican opposition, a proposal requiring the legislature to establish a system of free higher education also was enacted. The convention, however, rejected efforts to expand fiscal home rule for large urban communities. After voting to submit all proposals to voters in a single package, the convention adjourned on September 23.

The proposed new 23,000-word constitution won the support of Gov. Nelson A. Rockefeller and Senator Kennedy, but it was opposed by John V. Lindsay, mayor of New York City, as well as a variety of

UPI

CONSTITUTIONAL CONVENTION President Anthony J. Travia shows first copy of new charter to delegates. Voters overwhelmingly rejected constitution on November 7.

Democrats, Republicans, Conservatives, and nonpolitical groups. The effort of five months, which cost the taxpayers about $6 million, was decisively defeated by them on November 7 by a vote of 3.3 million to 1.3 million.

Legislation and Budget. Governor Rockefeller opened the 190th legislative session with a proposal for a $2.5 billion highway and mass transportation bond issue, aimed especially at the area in and around New York City. The legislature affirmed his plan and also one for transit unification, and the governor signed the bill on May 1. The bond issue, which received bipartisan support, was overwhelmingly approved by the voters on election day.

On February 1, Governor Rockefeller proposed a record state budget of nearly $4.7 billion to be balanced by anticipated revenues from lottery sales, accelerated income tax collections, and heavy bond sales. The politically divided legislature voted approval of a slightly modified version on March 15. No new taxes were requested in 1967, but in the face of increasing demands for school and welfare assistance late in the year, the governor indicated that he would seek further taxes in 1968.

The most controversial measure of the 1967 session, a bill to liberalize New York's abortion law, was killed by a legislative committee even though it had the governor's support. In other action, the legislature approved a one-year moratorium on the issuance of liquor licenses and authorized direct primaries, thereby giving insurgent candidates a chance of nomination. The 20-year-old Condon-Wadlin Act was discarded in favor of the Taylor Law, which permits flexible penalties in place of dismissals of public employees who go on strike.

Lottery. On April 18 the governor signed a bill implementing the lottery amendment to the state constitution, which was approved by the voters in November 1966, and on June 1, 1967, the first lottery tickets in the history of the state went on sale. The proceeds, to be used for educational purposes, were expected to be $180 million a year; but it was soon evident that sales in 1967 would be far below expectations. To further complicate matters, the U.S. Senate in November voted to prohibit federally insured banks from selling lottery tickets. In December an effort was made to increase sales by permitting tickets to be sold in department and discount stores, in addition to banks and hotels. The biggest loser in 1967 was New York City, which had anticipated $72 million in school aid from the lottery.

Civil Liberties. The New York Court of Appeals on June 1 upheld a state law requiring public schools to lend textbooks to pupils attending parochial and private schools. On July 7 it ruled unconstitutional a 1788 statute that permitted arrests for vagrancy of persons who had no visible means of support. On January 23 the U.S. Supreme Court voided the state's loyalty laws aimed at keeping "subversives" off the faculties of public schools and state colleges.

Civil Disorder. Unlike many other areas in the United States, New York had a fairly quiet summer with respect to racial violence. In the ghetto area of Buffalo, on June 28-30, some 1,500 Negro youths rioted during successive nights of sniper fire and brick throwing. On August 18 a night of vandalism and disorder in Syracuse led to a citywide curfew.

In an effort to improve slum conditions in urban centers, Governor Rockefeller announced on August 1 that $4.5 million would be made available each year to wage a "total war" on rats in ghetto areas.

Reapportionment. On December 18 the U. S. Supreme Court affirmed the May 10 ruling of a federal district court that New York's congressional districts must be reapportioned by the legislature before the 1968 elections. The present districts, reapportioned in 1961, were held to violate the Supreme Court's "one-man, one-vote" ruling.

(See also NEW YORK CITY.)

LEO HERSHKOWITZ
Queens College, City University of New York

NEW YORK • Information Highlights

Area: 49,576 square miles (128,402 sq km).
Population: 18,335,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Albany, the capital, 127,000; New York, 8,080,000; Buffalo, 505,000; Rochester, 305,000; Syracuse, 216,000; Yonkers, 206,000.
Government: *Chief Officers*—governor, Nelson A. Rockefeller (Republican); lt. gov., Malcolm Wilson (R); secy. of state, John P. Lomenzo (R); atty. gen., Louis J. Lefkowitz (R); controller, Arthur Levitt; commissioner of educ., Dr. James E. Allen, Jr.; chief justice, Stanley H. Fuld. *Legislature*—(met Jan. 4-April 2, 1967; convenes Jan. 3, 1968): Senate, 57 members (31 Republicans, 26 Democrats); Assembly, 150 members (70 R, 79 D, 1 vacancy).
Education: *School enrollment* (1965–66)—public elementary, 1,875,000 pupils (73,500 teachers); public secondary, 1,379,000 pupils (70,500 teachers); nonpublic schools, 950,500 pupils (32,660 teachers); college and university (fall 1965), 586,462 students. *Public school expenditures* (1965–66)—$2,540,000,000 ($869 per pupil); average teacher's salary, $7,700.
Public Finance (fiscal year 1967): *Revenues*, $5,806,002,504 (2% sales tax, $604,327,031; motor fuel tax, $275,808,331; federal funds, $1,053,079,345). *Expenditures*, $5,976,728,415 (education, $2,279,100,000; health, welfare, and safety, $2,101,000,000; highways, $745,900,000). *State debt*, $1,158,750,000 (March 31, 1967).
Personal Income (1966): $63,669,000,000; average annual income per person, $3,497.
Public Assistance (fiscal year 1967): $921,004,676 to 957,084 recipients (aged, $62,232,623; dependent children, $384,884,191).
Labor Force (July 1967): *Nonagricultural* (wage and salary earners), 6,911,657 (27.2% manufacturing, 20.1% trade, 15.4% government). *Unemployed persons*—350,000.
Manufacturing (1966): Value added by manufacture, $19,559,120,000 (transportation equipment, $1,342,730,000; primary metals, $916,516,000; machinery, $3,506,073,000; fabricated metals, $865,811,000; food products, $1,846,827,000; printing and publishing, $2,576,592,000; apparel and related products, $2,472,531,000).
Agriculture (1966): *Cash farm income*, $1,339,211,000 (livestock, $1,002,248,000; crops, $314,794,000; govt. payments, $22,169,000). *Chief crops* (tons)—apples, 552,000 (ranks 2d among the states); hay, 5,820,000; potatoes, 947,300.
Mining (1966 est.): *Production value*, $296,045,000. *Chief minerals* (tons)—sand and gravel, 38,756,000; stone, 32,086,000; salt, 4,952,000; clays, 1,378.000.
Fisheries (1966): *Commercial catch*, 63,895,378 pounds ($11,332,241). *Leading species*—hard clams, 6,581,184 pounds ($5,788,343); menhaden, 4,870,050 pounds ($81,742).
Transportation: *Roads* (1966), 102,755 miles (165,333 km); *motor vehicles* (Dec. 1966 est.), 6,408,502; *railroads* (1966) 7,600 track miles (12,228 km); *airports* (1967), 21.
Communications (1967): *Telephones*, 10,860,900; *television stations*, 33; *radio stations*, 236; *newspapers* (1966), 96 (daily circulation, 7,252,846).

NEW YORK CITY

In 1967, his second year in office, Mayor John V. Lindsay faced almost daily picketing at City Hall by partisan New Yorkers as his administration sought to solve problems of labor, air pollution, and rapid racial and ethnic changes.

Education. Disagreements among teachers, the mayor, the Board of Education, and local communities over control and direction of the school system occurred throughout the year. Questions of salaries and educational policies resulted in mass teacher resignations, and almost 80% of the city's 59,500 teachers failed to report for work on September 11, the opening day of the fall term. On September 13 the state supreme court declared the stoppage illegal and ordered the teachers back to work, but the walkout continued through September 28.

Finally, after three days of round-the-clock negotiations at City Hall and Gracie Mansion (the mayor's residence), agreement was reached on a new contract calling for an increase of $1,350 over a 2-year period in the basic starting salary and a maximum salary of $13,900. Other benefits included a $10 million fund for school improvement experiments. On October 4 the state supreme court found the United Federation of Teachers and its president, Albert Shanker, guilty of contempt. It fined the union $150,000 and sentenced Shanker to a 15-day jail sentence.

A special panel headed by former presidential assistant McGeorge Bundy in November called for a total reform in the city school system and recommended its reorganization into a federation of 30 to 60 locally governed community school districts. The plan, endorsed by Mayor Lindsay, was being studied by the state legislature.

Labor Unrest. Numerous strikes and threats of strikes plagued the labor scene in 1967. A 164-day plumbers' strike, which began on July 25, 1966, ended Jan. 4, 1967. Gravediggers struck from January 2 to 26. A week-long tugboat strike by 3,400 workers ended on February 5 with agreement on a 30-hour week. After months of negotiations, strike threats, and a work slowdown by firemen, the city reached agreement with its firemen and policemen on April 7, granting wage boosts totaling $43.5 million over a 27-month period.

A threatened strike by 2,200 physicians against Harlem Hospital and 196 clinics and child care centers was averted on January 10, when Dr. Morris Eisenstein, who had been removed from active duty at the hospital after making charges of patient abuse, was reinstated. These charges were repeated by State Sen. Seymour R. Thaler, who asserted that city hospitals were using the poor as "guinea pigs."

On January 16 about 6,000 of the 7,500 welfare department employees who service 650,000 relief recipients went on strike over wages and size of work loads. Two days later the Social Service Employees Union accepted a proposal for fact finding. However, on June 19 the union began a "work-in"—in effect another work stoppage—that lasted until July 30, with major issues being left for mediation.

Housing and Building. On July 11 the City Council approved Mayor Lindsay's proposal to merge the city's housing agencies into a single Housing and Redevelopment Administration. Three days later a new housing maintenance code became law, enabling the city to qualify for $475 million in federal aid.

A 7-year dispute over the creation of a World Trade Center ended on June 22 when the Board of Estimate ratified an agreement between the city and the Port of New York Authority, sponsor of the $575 million project in lower Manhattan.

On August 16 the City Planning Commission formally instituted the $25 million Model Cities Plan by approving middle- and low-income housing for three slum areas in Manhattan, the Bronx, and Brooklyn.

Racial Unrest. Unlike many other urban centers in the United States, New York had a relatively calm summer. The single major disturbance occurred during the week of July 22, when violence erupted in "El Barrio," the Puerto Rican community of East Harlem, after an off-duty policeman killed a Puerto Rican. Two persons were killed, many were injured, and there was extensive property damage. Mayor Lindsay toured the area, and agreement was reached on finding ways of preventing police brutality. The mayor's frequent walking tours of ghetto and slum areas were widely credited with averting serious racial flare-ups during the summer of 1967.

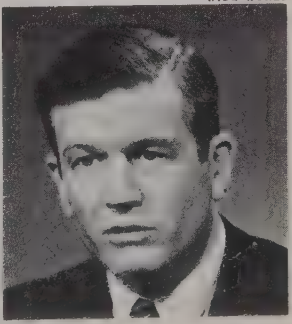
Air Pollution. Attention was focused on the problem of air pollution after reports issued by the federal Public Health Service on January 9 and August 13 disclosed that New York had the most severe air pollution of any major metropolitan area in the nation (see also POLLUTION). Mayor Lindsay sought the cooperation of the Consolidated Edison Company, the city's major utility, to reduce pollution of sulfur oxides and called for federal aid to combat pollution.

War Protests. New York City was a center for the antiwar and antidraft movements. There were many demonstrations, marches, campus strikes, and draft-card burnings during the year. Probably the largest antiwar demonstration in the nation's history came on April 15, when over 100,000 marchers protested U. S. policy in Vietnam. Turbulent demonstrations occurred during "Stop the Draft Week" (the week of December 3).

JOHN V(LIET) LINDSAY, mayor of New York City, in 1967 called for increased federal aid to cope with "the crisis of our cities," which, he maintained, should take precedence over commitments abroad. During the nationwide summer unrest, he toured ghetto areas and met with community leaders. On July 27 he was appointed by President Johnson as vice chairman of the Advisory Commission on Civil Disorders. In September he negotiated a settlement of a teachers' dispute that had delayed the opening of schools.

Lindsay was born in New York City on Nov. 24, 1921. After studying at Yale University (B. A., 1943; LL. B., 1948), he entered law practice and became active in the Republican party. In 1955 he was appointed executive assistant to U. S. Attorney General Herbert Brownell. Elected representative of New York's 17th Congressional District in 1958, Lindsay served on the House judiciary committee and compiled a strongly liberal record in Congress. He took office as mayor of New York in January 1966.

WIDE WORLD



THE NEW YORK TIMES

JAMES L. MARCUS (*left*), former water commissioner of New York City, who in December was indicted on a kickback charge in connection with the cleaning of Jerome Park Reservoir, is shown in earlier photo with Mayor John V. Lindsay as they turned on the water to refill the reservoir.

Marcus Case. On December 18, James L. Marcus, who had resigned as city commissioner of water supply, gas, and electricity the previous week, was indicted by a federal grand jury on charges of having accepted a kickback on a city contract. This scandal hit the Lindsay administration following a series of resignations of city officials during the year. The mayor's personal integrity was not questioned, but he was criticized for not having investigated Marcus.

Newspapers. New York City lost another newspaper on May 5, when the *World Journal Tribune* ceased publication. (See also NEWSPAPERS.)

Economy. On March 4 the Board of Estimate approved a $1,058,775,797 capital budget for the fiscal year beginning July 1, 1967—the first budget exceeding $1 billion. Top priority was given to improving health services and educational and antipoverty facilities. The expense budget was $5,177,513,877.

Employment continued to rise. In August 1967, there were 4,091,500 persons employed, compared with 4,026,200 in August 1966. Unemployment declined from 158,000 to 145,700. The cost-of-living index rose to 119.7 (1957–59 = 100) in September.

LEO HERSHKOWITZ
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NEW ZEALAND

After several years of general prosperity, New Zealand entered a period of economic recession in 1967. Military assistance to the government of South Vietnam was increased.

Economy. The government was forced to take strong deflationary measures in 1967 to meet an increasingly adverse balance-of-payments situation. Heavy importation in recent years had reduced New Zealand's reserves of overseas exchange to a low level by the end of 1966, and economic experts urged the government to take prompt action.

The situation was aggravated by a fall in the price of wool, the country's most important export commodity. The New Zealand Wool Commission attempted to maintain wool prices by buying wool when the price fell below a fixed minimum level. By the end of the wool season in June 1967 it had purchased and withheld from the world market an unprecedented 645,700 bales, more than 30% of the country's total production. Total receipts for exports in the year ending in June 1967 had dropped to N. Z. $759 million from N. Z. $803 million the previous year.

In February and again in May, the government introduced a series of austerity measures to reduce the level of internal spending and hence the demand for imports. The measures, announced on February 10, included removal of subsidies on butter and bread; increased postal, telephone, and telegraph charges; stricter curbs on hire-purchase sales; and reduced government spending. On May 4 increased taxes on tobacco, liquor, automobiles, and gasoline were announced, along with further cuts in government spending and credit restrictions. Controls on imports and travel allowances were also tightened.

By July there were approximately 7,000 registered unemployed, a small proportion of the labor force by international standards (less than 1%) but the first time that New Zealand had experienced any significant unemployment since the 1930's.

In August the minister of finance, Robert Muldoon, warned that New Zealand would not be out of economic difficulties for at least two more years.

In November, in the wake of the British devaluation of the pound, the New Zealand dollar was devalued. It is now worth U. S. $1.12.

Political Trends. Deteriorating economic conditions cost the government of the National party some political support in 1967. The opposition Labour party blamed government mismanagement for the country's economic difficulties and campaigned vigorously in a number of by-elections. In April a South Island constituency that had returned a government member by a comfortable majority in 1966 was nearly lost to Labour.

Vietnam. New Zealand stepped up its military contribution to the Vietnam war in 1967. In March, Prime Minister Keith J. Holyoake announced that an infantry company of 210 men would be sent to Vietnam. On October 16 it was announced that 170 additional infantrymen would go to Vietnam, bringing the total number of New Zealand troops there to over 500. South Vietnam's Premier Nguyen Cao Ky had visited New Zealand (January 23–25) to encourage the country's support for his government.

Referendum. A national referendum was held on September 23 to decide two questions: (1) whether the term of Parliament should be extended from three to four years, and (2) whether drinking hours at hotels and taverns should be extended. The voters decisively turned down a four-year Parliament. They approved extended drinking hours.

Decimal Coinage. On July 10, New Zealand adopted a new system of coinage, abandoning pounds, shillings, and pence, for dollars and cents. The New Zealand dollar is equivalent to 10 shillings in the old currency.

Fishing Agreement. After lengthy negotiations, the governments of New Zealand and Japan signed an agreement (July 12) on the question of Japanese fishing rights near the coasts of New Zealand. Japanese vessels are to be excluded from waters within

NEW ZEALAND • Information Highlights

ASIA
AUSTRALIA

Area: 103,739 square miles (268,684 sq km).
Population: 2,712,000 (Dec. 31, 1966 est.).
Chief Cities (1966 census): Wellington, the capital, 131,655; Christchurch, 161,566; Auckland, 149,989; Dunedin, 77,149.
Government: *Sovereign*—Queen Elizabeth II of Britain; *Governor General*—Sir Arthur Porritt (appointed Dec. 17, 1966); *Prime Minister*—Keith J. Holyoake (took office Dec. 12, 1966). *Parliament*—House of Representatives, 80 members (party seating, 1967: National 43; Labour, 36; Social Credit, 1).
Religious Faiths: Anglicans, 35% of population; Presbyterians, 22%; Roman Catholics, 14.4%; others, 28.6%.
Education: *Literacy rate, 99.9%* of population. *Total school enrollment* (1964)—662,917 (primary, 461,851; technical and secondary, 153,641; higher, 47,425).
Finance (1966 est.): *Revenues,* $1,450,900,000; *expenditures,* $1,650,700,000; *public debt,* $3,135,800,000; *monetary unit,* New Zealand dollar (0.7194 dollar equals U. S.$1).
Gross National Product (1966): $5,200,000,000.
National Income (1965): $4,506,000,000; average annual income per person, $1,707.
Economic Indexes: *Industrial production* (1964), 156 (1958=100); *agricultural production* (1965) 132 (1956–57=100); *cost of living* (1966) 122 (1958=100).
Manufacturing (metric tons, 1966): Petroleum products (1964), 1,000,000; cement, 878,400; meat, 814,000; butter and cheese, 366,000; beer (1965), 278,800; wheat flour, 207,600.
Crops (metric tons, 1966–67 crop year): Wool, 327,500 (ranks 3d among world producers): potatoes, 275,000; wheat, 292,000; barley, 124,000; apples (1965–66), 102,000; oats, 44,000; dry peas (1965–66), 24,000.
Minerals (metric tons, 1965): Sand, rock, and gravel, 10,443,000; limestone, 2,661,000; lignite (1966) 1,992,000; coal (1966), 642,000; serpentine, 134,000; pumice, 109,594; salt, 34,718; diatomite, 1,757; gold, 12,136 troy ounces.
Foreign Trade (1966): *Exports,* $1,075,860,000 (chief exports: wool, $324,426,000; lamb and mutton, $168,746,000; butter, $142,614,000); *imports,* $1,094,625,000 (chief imports, 1965: nonelectrical machinery, $148,090,000; transport equipment, $131,525,000; motor vehicles, $110,533,000). *Chief trading partners* (1965): Britain (took 48% of exports, supplied 35% of imports); U. S. (took 12% of exports, supplied 12% of imports); Australia (took 4% of exports, supplied 18% of imports).
Transportation: *Roads* (1964), 57,439 miles (92,437 km); *motor vehicles* (1965), 881,331 (automobiles, 718,566); *railways* (1965), 3,263 miles (5,251 km); *merchant vessels* (1966), 54 (174,000 gross registered tons); *national airline,* New Zealand National Airways; *principal airports,* Auckland, Christchurch, Wellington.
Communications: *Telephones* (1967): 1,087,133; *television stations* (1967), 16; *television sets* (1967), 560,000; *radios* (1965), 644,000; *newspapers* (1964), 41 (daily circulation, 1,034,000).

6 miles (10 km) of the coast, but until 1970 a limited number will be permitted inside the 12-mile limit.

Mining Disaster. New Zealand's worst mining disaster in more than 50 years occurred on January 19, when an explosion in the Strongman coal mine near Greymouth killed 19 men.

JAMES HOLT
University of Auckland

NEWFOUNDLAND

Major developments in Newfoundland and Labrador in 1967 were industrial expansion, educational progress, and participation in the celebration of Canada's Centennial of Confederation.

Industrial Expansion. By far the most outstanding event of 1967 was the official ground breaking in July for the $900 million power project at Churchill Falls, Labrador. With a projected output of 4,500,000 kilowatts, it will be the Western world's largest single source of power.

NEWFOUNDLAND • Information Highlights

Area: 156,185 square miles (404,520 sq km).
Population: 493,396 (1966 census).
Chief Cities (1966 census): St. John's, the capital, 79,884; Corner Brook, 27,116.
Government: *Chief Officers*—lt. gov., Fabian O'Dea; premier Joseph R. Smallwood (Liberal party); min. of prov. affairs, G. A. Frecker (L); atty. gen., T. A. Hickman (L); min. of finance, F. W. Rowe (L); min. of educ., H. R. V. Earle (L); chief justice, R. S. Furlong. *Legislature*—Legislative Assembly, 42 members (39 Liberal, 3 Progressive Conservative).
Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 144,129 pupils (5,351 teachers); private schools, 37 pupils (4 teachers); college and university (fall 1966), 3,893 students. *Public school expenditures* (1963)—$23,597,000 ($188 per pupil); average teacher's salary (1964–65 est.), $3,600.
Public Finance (fiscal year 1967 est.): *Revenues,* $121,530,000 (sales tax, $37,810,000; income tax, $8,863,000; federal funds, $48,560,000). *Expenditures,* $142,790,000 (education, $39,400,000; health and social welfare, $32,990,000; transport and communications, $29,810,000).
Personal Income (1966 est.): $650,000,000; average annual income per person, $1,287.
Public Assistance (fiscal year 1967 est.): $14,530,000 (chiefly to the aged and blind, $2,210,000; dependents and unemployed, $8,600,000).
Labor Force (industrial employees only, 1966 est.): 70,900.
Manufacturing (1964): Value added by manufacture, $78,988,000 (paper and allied industries, $39,115,000; nonmetallic mineral products, $3,560,000; printing and publishing industries, $2,786,000; wood industries, $1,559,000).
Mining (1966 est.): *Production value,* $241,863,438. *Chief minerals* (short tons)—iron ore, 16,231,625 (ranks 1st among the provinces by value); copper, 18,669 (ranks 6th); zinc, 34,438; asbestos, 64,850 (ranks 3rd).
Fisheries (1966): *Commercial catch,* 682,143,000 pounds ($25,634,000). *Leading species*—cod, 345,162,000 pounds ($14,274,000); flounder and sole, 112,835,000 pounds ($3,282,000); lobster, 3,482,000 pounds ($2,183,000); redfish, 76,847,000 pounds ($1,842,000).
Transportation: *Roads* (1965), 5,961 miles (9,591 km); *motor vehicles* (1965), 92,885; *railroads* (1966) 936 track miles (1,506 km); *licensed airports* (1966), 7.
Communications: *Telephones* (1965), 88,038; *television stations* (1967), 2; *radio stations* (1966), 15; *newspapers* (1966), 3.

In August the $97 million Baie d'Espoir hydroelectric project on Newfoundland's south coast was officially opened. The project has three stages—phase one, producing 300,000 horsepower, went into full operation in 1967; phase two was under way during the year; the third and last phase is to be completed in 1972, with a total output of 700,000 horsepower. The availability of abundant, cheap hydroelectric power from Baie d'Espoir made possible a $45 million phosphorus complex at Long Harbour, which was under construction in 1967.

As part of the provincial government's drive to modernize the fishing industry, a new $9 million shipyard was built at Marystown. A groundfish-processing plant also went into operation at Marystown. The program of fisheries expansion and modernization also included a new fish-processing plant at Harbour Grace and a complex for processing salted and fresh fish at St. John's.

Education. Memorial University's new $1,600,000 Marine Sciences Research Laboratory at Logy Bay was officially opened in June. Erected on a site near where the Labrador Current and the Gulf Stream mingle with one another, the laboratory provides unique facilities for the study of the biological, chemical, geological, and physical aspects of the marine sciences in a controlled environment.

Centennial Year. Newfoundland's centennial projects included the $6 million Arts and Culture Centre in St. John's.

ALLAN M. FRASER
Provincial Archivist of Newfoundland and Curator of the Newfoundland Museum

NEWSPAPERS

The most striking event of 1967 in American journalism was the sudden death of the New York *World Journal Tribune* on May 5. The 8-month-old daily, lineal descendant of 38 New York newspapers, born on Sept. 12, 1966, of a three-way merger after an agonizing 140-day shutdown, died with the announcement that its losses were running at the rate of $700,000 a month.

"No other city in the world has faced a comparable tragedy," wrote *Editor & Publisher*, the industry's weekly. "Four major papers suspended in less than four years—three of them in the last year."

The closing came with particular shock to the newspaper's 2,500 employees and the community because optimistic comments had been emanating from the management. Circulation had reached 700,000 in January—making it one of the 10 largest dailies in the country—and advertisers had begun to respond. Nevertheless, the end came with dramatic suddenness.

Explanations were rife. It was clear that the merger among Scripps-Howard, Hearst, and Whitney, the paper's owners, was hardly a harmonious association. Morale throughout the plant was painfully low. The paper was housed in crowded, obsolete quarters. Plant and equipment were old and inadequate. Delivery was difficult. The advertising picture had been bleak. Making a new newspaper out of three older ones created problems of establishing an image. Moreover, difficulties with labor were persistent and discouraging.

10 LEADING NATIONS IN NEWSPAPER CIRCULATION, 1965

Country	Daily newspapers	Daily circulation
USSR	639	60,948,000
United States	1,751	60,358,000
Japan	172	44,134,000
Britain	110	26,100,000
West Germany	411	19,264,000[2]
France	128	11,872,000
East Germany	34	6,822,000[1]
Italy	92	5,811,000[3]
India	514	5,693,000[1]
Poland	42	5,246,000

[1] Data for 1964. India's data relate to English dailies only. [2] Refers to 12 dailies only. [3] Refers to 82 dailies only. Source: United Nations.

Workers' contracts in the industry expired on March 31, but talks continued and the newspapers published. The typographers, with Bertram A. Powers in charge, chose the *Daily News,* a rich morning tabloid, for their target contract. On April 28, after slowdowns and periodic closedowns, Powers and the *News* announced an agreement, the principal point of which was a 21% wage increase over three years. Across the city, the managers of the *World Journal Tribune* took a look at the *News* contract and within a week made their decision to suspend publication.

Mayor John V. Lindsay stepped in to try to save the situation. The *Newsday* interests on Long Island were approached as possible buyers, as were the Cowles interests (Des Moines and Minneapolis dailies and *Look* magazine), the Washington *Post,* Lord Thomson of Fleet, S. I. Newhouse, and John S. Knight—all prosperous owners of chains. The Hearsts were encouraged to try again on their own. But the New York market was unattractive to all.

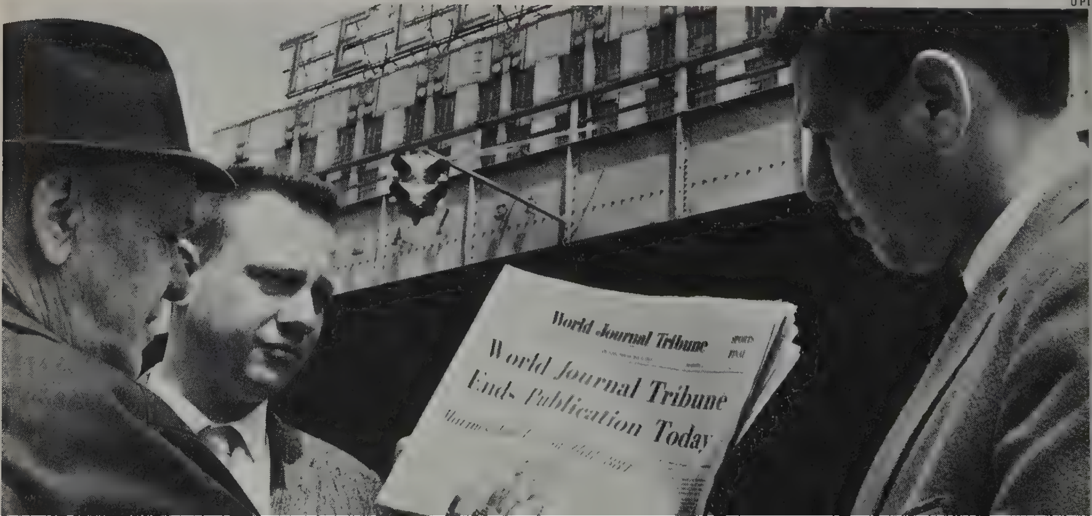
More Ads, More Readers. The troubles of competitive metropolitan newspapers showed signs of spreading to Chicago, and perhaps Boston, during the year. Elsewhere, particularly in smaller cities and in the suburbs, the prosperity of the press was enough to offset all metropolitan losses. Total newspaper linage—space devoted to advertising—was 15% higher in 1967 than the previous five year average. As the year began, newspapers had registered an 8% gain in advertising revenue over the preceding year.

WIDE WORLD

World Journal Tribune
Atlanta Faces New Riots

BIRTH AND DEATH of the New York *World Journal Tribune,* an afternoon and Sunday newspaper born from the merger of three ailing papers. Its first edition was proudly shown to Mayor John V. Lindsay (*left*). But only eight months later, on May 5, it published its obituary (*below*).

UPI


World Journal Tribune
World Journal Tribune Ends Publication Today

Circulation at the start of 1967 was at an all-time high—61,397,252. This was an annual gain of more than a million readers, and a 20% gain over 20 years, although 1967 figures will reflect the losses from New York. There were 1,754 U. S. dailies as the year began, three more than the year before.

Changes in Ownership. Change of ownership increased, especially in chains. Lord Thomson, already the owner of 20 U. S. dailies, added 4 more—the Leavenworth (Kans.) *Times*, the Lancaster (Ohio) *Eagle-Gazette*, the Alliance (Ohio) *Review*, and the Valdosta (Ga.) *Times*—and then capped the year by buying the entire Brush-Moore chain for $72 million, the largest newspaper transaction in history. Brush-Moore held 12 dailies and 4 weeklies in five states from Maryland to California. S. I. Newhouse had paid a record-breaking $53.4 million earlier in 1967 for the Cleveland *Plain Dealer*. Ralph Ingersoll, who had a financial interest in eight newspaper properties, bought six Philadelphia area weeklies and the Fall River (Mass.) *Herald News*. The Gannett chain moved into Rockford, Ill., by buying two dailies.

Resisting the merger trend was a decision of a U. S. District Court in October ordering the Los Angeles *Times* to get rid of the nearby San Bernardino *Sun*, which it had purchased in 1964. The suit was brought by the antitrust division of the Justice Department.

The New York *Times* closed its European edition during the year and merged it with the Paris *Herald Tribune*.

Free Press-Fair Trial Controversy. American Bar Association guidelines influenced the sharp restrictions on press coverage of many court cases, among them the murder trials of Dr. Carl Coppolino in Florida, Charles H. Schmidt, Jr., in Arizona, and Richard Speck in Peoria, Ill. The opposition of newspapermen to the guidelines hardened; the guidelines were condemned for being too severe and a threat to the public's right to know.

Awards, Honors, Deaths. Harrison Salisbury of the New York *Times* visited North Vietnam in late 1966 and early 1967 to make an exhaustive report on the "other side" of the war. This exploit led to general controversy and a sharp debate involving the Pulitzer Prizes. After being nominated for the foreign reporting prize, Salisbury was turned down by the Pulitzer advisory board. Similarly, Drew Pearson and Jack Anderson failed to receive an award for their part in exposing Sen. Thomas Dodd's financial affairs. Pulitzer gold medals for meritorious public service went to the Louisville *Courier-Journal* and the Milwaukee *Journal* for conservation campaigns. (See also PRIZES AND AWARDS.)

President Johnson's press secretary, Bill D. Moyers, became publisher of *Newsday*, a Long Island (N. Y.) daily. He was succeeded on the White House staff by George Christian.

Four more news correspondents were killed while covering the Vietnam War in 1967 (making a total of 10 to die in Vietnam). One of them was the distinguished French author Bernard Fall. Three newsmen were killed in the Arab-Israeli fighting in June.

Among other industry figures who died in 1967 were Frank A. Blethen, president of the Seattle *Times*; Roy Roberts, formerly president and editor of the Kansas City *Star*; Bernard Kilgore, chairman of the board of Dow Jones & Co., which publishes the *Wall Street Journal*; Willard M. Kiplinger, Washington newsletter and magazine publisher; and Richard H. Amberg, St. Louis *Globe-Democrat* publisher.

RICHARD T. BAKER
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NICARAGUA

The electoral victory of Maj. Gen. Anastasio Somoza Debayle, Jr., and the start of his term as president, dominated Nicaraguan life in 1967.

Political Affairs. Shortly before the election, on January 22, Fernando Agüero Rocha, the presidential candidate of the National Opposition Union—a coalition of parties opposed to Somoza—led the opposition in a bloody, 20-hour battle against government forces in Managua. The opposition was united against the continuation of the 35-year dominance of the Somoza family in Nicaraguan politics. Agüero claimed that the country's electoral system was unfair and that it was rigged to ensure a Somoza victory. The January 22 melee, which Agüero later admitted was an attempted coup, resulted in over 30 deaths, more than 150 arrests, and the suspension of Nicaragua's only liberal newspaper, *La Prensa*. (The paper later resumed publishing, but its

NICARAGUA • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 53,938 square miles (139,700 sq km).
Population: 1,715,000 (June 30, 1966 est.).
Chief Cities (1963 census): Managua, the capital, 248,811 (1964 est.); León, 44,053; Granada, 28,507.
Government: *President*—Maj. Gen. Anastasio Somoza Debayle (took office May 1, 1967). *Parliament*—National Assembly—Chamber of Deputies, 54 members (party seating, 1967: Nationalist Liberals, 36; Nicaraguan Conservatives, 18); (name of 2d house:) Senate, 16 members (party seating, 1967: Liberals, 11; Conservatives, 5).
Religious Faiths: Roman Catholic, 94% of population.
Education: *Literacy rate* (1963), 50% of population aged 15 and over. *Total school enrollment* (1964)—225,443 (primary, 199,381; secondary, 15,759; teacher-training, 4,756; technical, 2,777; higher, 2,770).
Finance (1967 budget): *Revenues*, $96,200,000; *expenditures*, $96,200,000; *monetary unit*, córdoba (7 córdobas equal U. S.$1).
Gross National Product (1966): $623,000,000.
Cost of Living Index (1966): 107 (1958=100).
Manufacturing (metric tons, 1965): Sugar (1966), 118,000; gasoline, 79,000; cement, 66,000; beer, 11,400.
Crops (metric tons, 1966–67 crop year): Cottonseed, 202,000; maize, 165,000; cotton lint, 119,000; sorghum (1964–65), 47,000; dry beans, 38,000; coffee, 36.000.
Minerals (metric tons, 1965): Lime, 24,000; salt, 18,140; copper, 10,186; gypsum, 5,400; silver, 380,377 troy ounces.
Foreign Trade (1966): *Exports*, $137,660,000 (chief exports: cotton, $56,800,000; coffee, $21,760,000; meat, $9,950,000; cottonseed, $8,170,000); *imports*, $181,920,000 (chief imports, 1964: nonelectrical machinery, $19,883,000; transport equipment, $11,238,000). *Chief trading partners* (1965): U. S. (took 24% of exports, supplied 47% of imports); Japan (took 32% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 3,813 miles (6,136 km); *motor vehicles* (1965), 24,075 (automobiles, 16,749); *railways* (1965), 216 miles (347 km); *merchant vessels* (1966), 5 (14,000 gross registered tons); *national airline*, Lanica.
Communications: *Telephones* (1966): 12,322; *television stations* (1965), 2; *television sets* (1965), 16,000; *radios* (1964), 100,000; *newspapers* (1965), 6 (daily circulation, 81,000).

editor, Pedro Joaquín Chamorro, a staunch enemy of Somoza, was indicted.)

Following the 2-to-1 victory of General Somoza over Agüero on February 5, Agüero refused to collaborate with the new administration. But he promised to take the role of an honest and loyal opposition. A great blow to the opposition came with the death on April 13 of the president-elect's brother, ex-president Luis Somoza Debayle, whom many felt might act as a restraining influence on his brother's strong-man inclinations. After taking office on May 1, General Somoza enacted a program to trim government expenses.

Foreign Affairs. Because of the strong focus on domestic matters in 1967, Nicaragua played one of the weaker roles in the Mexico City meeting in February that resulted in the establishment of Latin America as a nuclear-free zone. As president-elect, General Somoza attended the Buenos Aires meeting of foreign ministers of the Organization of American States (OAS) in February, at which Nicaragua voted with the majority of Latin American states for arms reduction. At the April summit meeting of presidents of OAS member countries at Punta del Este (Uruguay), to which Somoza accompanied interim president Lorenzo Guerrero Gutiérrez, Nicaragua favored arms reduction and firm establishment of the Latin American common market.

In August government forces were increasingly engaged in pursuing and fighting guerrillas in mountainous areas of the north. It was widely believed that Cuban support was behind the guerrillas, and this interference in Nicaragua's internal affairs was condemned by the Nicaraguan Chamber of Deputies and the country's delegate to the OAS.

Foreign investment, especially Mexican, was encouraged by the Nicaraguan government in 1967.

After ordering military aircraft to disperse Salvadoran fishing boats in Pacific coastal waters, the Nicaraguan government notified all foreign fishing interests that fishing would not be permitted within 25 miles of the Corn Islands, in the Caribbean.

Disasters. A succession of calamities hit Nicaragua at mid-year 1967. In May the commercial zone of Puerto Cabezas, on the Caribbean, was destroyed by fire. Heavy rains in the west caused the Rama River to flood several populated centers, and La Esperanza, the port for Managua, suffered heavy damage. In July a U. S. medical team specializing in immunization flew to Managua to help combat a polio epidemic.

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NIGER

Unlike neighboring Nigeria, Niger remained quiet in 1967. No major political upheavals occurred during the year, and the economic situation showed marked improvement. On August 3, the 7th anniversary of Niger's independence, President Hamani Diori pardoned five men previously sentenced to death for a 1963 plot against the government.

President Diori pledged Niger's support to the Nigerian federal government in the civil war against secessionist Biafra. The disruption in Nigeria affected shipment of goods to and from Nigeria, but had no direct impact on the country.

Economic Developments. The Niger government granted a 75-year concession to a French-dominated mining consortium to exploit extensive uranium deposits (at least 30,000 tons) in the Aïr mountains. Niger holds 10% of the company's shares, and will receive 50% of the profits. Production of 200 tons per year will start in 1970, and may rise to 1,000 tons annually; all the uranium will be sold to France.

The Economic Development Fund of the European Economic Community granted $5,388,000 for the construction of 514 wells, which will average nearly 150 feet in depth. The Common Market also granted $1,372,000 for the third installment of Niger's development plan; nearly 40% of the funds will support prices for peanuts and cotton. A French government agency granted nearly $1 million for technical studies.

The record peanut crop of 1966–67, totaling 193,000 tons, was the highest in Niger's history. Of this total, 171,400 tons were exported. The country signed a 2-year trade agreement with Italy which provides for Niger to export cotton, peanuts, and hides in exchange for building materials, tools, and various manufactured goods.

Foreign Affairs. A border agreement was signed with Chad in April, regulating immigration, extradition, and customs procedures. Niger remained closely linked to France and fellow members of the Council of the Entente–Dahomey, Ivory Coast, and Togo. Niger contributed $168,000 to an Entente investment guarantee fund, which will support up to $26 million in loans.

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NIGER • Information Highlights

ASIA
AFRICA

Area: 489,189 square miles (1,267,000 sq km).
Population: 3,537,000 (July 1, 1967 est.).
Chief City (1964 est.): Niamey, the capital, 42,000.
Government: *President*—Hamani Diori (took office Feb. 25, 1959); *Parliament*—Legislative Assembly, 60 members (all belonging to the Niger Progressive party).
Religious Faiths: Muslims, 70% of population; tribal religions, 27%; others, 3%.
Education: *Literacy rate* (1960), 0.9% of population aged 15 and over. *Total school enrollment* (1964)—58,156 (primary, 55,146; secondary, 2,079; teacher-training, 502; technical, 429).
Finance (1967 budget): *Revenues*, $37,000,000; *expenditures*, $37,000,000; *monetary unit*, CFA franc (246.85 francs equal U. S.$1).
Gross National Product (1966 est.): $160,000,000.
Cost of Living Index (1965): 105 (1964=100).
Crops (metric tons, 1964–65 crop year): Millet (1966), 842,000; peanuts (1966–67), 193,000; sorghum (1966), 277,000; cassava, 149,000; sweet potatoes and yams, 24,000; onions, 23,000; dates, 5,000.
Minerals: Tin; gravel; sand; building stone.
Foreign Trade (1966): *Exports*, $34,896,000 (chief export: peanuts, $21,700,000); *imports*, $45,240,000 (chief imports, 1965: textile yarn and fabrics, $11,469,000; motor vehicles, $3,557,000; petroleum products, $2,344,000). *Chief trading partners* (1965): France (took 56% of exports, supplied 53% of imports); Nigeria (took 25% of exports, supplied 2% of imports); Netherlands (took 2 % of exports, supplied 4% of imports).
Transportation: *Roads* (1964), 4,621 miles (7,437 km); *motor vehicles* (1965), 7,126 (automobiles, 2,580); *principal airport*, Niamey.
Communications: *Telephones* (1966): 2,399; *radios* (1965), 45,000; *newspapers* (1965). 1 d(aily circulation, 1,300).

NIGERIA

The federal republic of Nigeria, which in recent years has been on the point of disintegrating, experienced civil war in 1967. The nation, with perhaps the most promising human and natural resources in Africa, suffers from deep-rooted tribal hostilities. Having failed to achieve autonomy within the federation and claiming a fear of genocide, the Ibo-dominated, oil-producing Eastern Region on May 30 declared its independence as the Republic of Biafra. Thereupon the federal government prepared to invade, Biafra resisted, and war ensued. Following federal victories in the fall, the war waned somewhat, but the East still refused to return to the federation under terms imposed by Nigeria's chief of state, Maj. Gen. Yakubu Gowon.

Background. Gowon, the officer who had come to power on Aug. 1, 1966, after two violent coups d'etat, immediately undertook to prepare the nation for a return to democratic civilian rule, but without sacrificing national stability. Retaining rule through military governors in the four regions, he moved to align the most powerful civilian elements behind his regime. A constitutional conference was appointed to determine the future governmental system. However, this promising beginning was shattered in September 1966 by the killing of thousands of Ibo throughout the Northern Region. By mid-October an estimated 100,000 Ibo had fled to the Eastern Region. The Eastern governor, Lt. Col. Odumegwu Ojukwu, suspicious of Gowon's intentions, withdrew from direct consultation with the central government. He questioned whether there again could be a united Nigeria, with Ibo living in constant fear, and he hinted at the secession of the East. For Ojukwu the only acceptable type of government was one with supreme power vested in the regions. Pending negotiations, no decrees of the central authority were to apply in the East without Ojukwu's approval. All non-Ibo were forced to leave the region, and a campaign to build up the Eastern army was begun.

Aburi Agreement. The stalemate between the East and the federal government was temporarily broken in January 1967, when Gowon and the military governors met at Aburi, Ghana. Agreement was reached on a number of points. The central government was to be weakened, and troops stationed in a region were to be natives of that area. However, these accords never were implemented.

WIDE WORLD

REBEL LEADER Odumegwu Ojukwu, flanked by military aides, addresses a press conference in the state house at Enugu, capital of the breakaway Eastern Region of Nigeria.

In early March, Ojukwu delivered an ultimatum stating that if Gowon did not implement the agreements by March 31, Ojukwu would do so unilaterally. Thus forced, Gowon finally made public the agreements on March 17, but announced a modification giving the central government emergency powers in any region.

Impasse. Ojukwu might have accepted this alteration, but he was not a free agent. Once unleashed, Ibo nationalism did not really want an accommodation with the central government. The massacres of 1966 had created a militant unity of purpose seldom

NIGERIA • Information Highlights

ASIA
AFRICA

Area: 356,667 square miles (923,768 sq km).
Population: 58,600,000 (mid-1966 UN est.).
Chief Cities (1963 Census): Lagos, the capital, 665,246; Ibadan, 627,379; Ogbomosho, 343,279; Mushin, 312,063.
Government: Military Government under *Chief of State*, Maj. Gen. Yakubu Gowon (assumed power Aug. 1, 1966).
Religious Faiths: Muslims, 42% of population; tribal religions, 27%: Christians, 25%; other, 6%.
Education: *Total school enrollment* (1964)—3,099,637 (primary, 2,849,488; commercial and secondary, 205,012; teacher-training, 29,373; technical, 7,813; higher, 7,951).
Finance (1965–66 est.): *Revenues,* $449,000,000; *expenditures,* $549,000,000; *monetary unit,* pound (0.3571 pound=U. S.$1).
Gross National Product (1965): $4,500,000,000.
Cost of Living Index (1966): 144 (1958=100).
Manufacturing (metric tons, 1965): Beer, 57,300; margarine, 3,100; lumber, 293,000 cubic meters.
Crops (metric tons, 1965–66 crop year): Sweet potatoes and yams (1963–64), 13,400,000 (ranks 1st among world producers); cassava, 10,800,000 (world rank, 3d), peanuts (1966), 1,392,245 (world rank 3d); cacao beans (1966), 268,000 (world rank 2d); natural rubber (1965), 68,900.
Minerals (metric tons, 1966): Niobium (1965), 2,589 (ranks 1st among world producers); crude petroleum, 20,604,000.
Foreign Trade (1966): *Exports,* $792,960,000 (chief exports: crude petroleum, $257,320,000; peanuts and oil, $141,400,000; palm nuts and oil, $93,520,000; cacao, $78,960,000); *imports,* $717,640,000 (chief imports, 1965: textile yarn and fabrics, $116,584,000; nonelectrical machinery, $114,993,000). *Chief trading partner* (1965): Britain (took 39% of exports, supplied 31% of imports).
Transportation: *Roads* (1964), 45,498 miles (73,220 km); *motor vehicles* (1965), 78,951; *railways* (1965), 1,989 miles.
Communications: *Telephones* (1967 est.): 75,000; *television stations* (1967), 8, *television sets* (1967), 38,000; *radios* (1964), 600,000; *newspapers* (1965), 22.

WIDE WORLD

NIGERIAN FEDERAL TROOPS, in hot pursuit of fleeing Biafran forces, cross a makeshift bridge that replaced one destroyed by the Eastern rebels as they retreated.

seen in Africa. Ojukwu rejected Gowon's condition, and Nigeria slowly slipped into civil war.

Ojukwu pressed his initiative, seizing federal offices in the East and demanding that the petroleum companies pay royalties to his government. Until these actions Gowon had reacted to each move by Ojukwu in an almost placating manner. Thus provoked, however, Gowon now imposed a partial economic blockade on the East. All air flights into the East were canceled, and in April the bridges across the Niger were closed. The assets of Easterners in other regions were frozen, and Gowon attempted to discourage European nationals from trading with the East. By mid-May, Ojukwu's hopes of attracting aid from Britain and the United States had faded.

Reorganization Plan. All attempts at reconciliation with the East having failed, Gowon proceeded to prepare a time schedule for the return of civilian government. On May 27 he announced the future form of the federation of Nigeria. It was to consist of 12 regions: the North was divided into 6 regions; the East into 3; the West into 2; and the Mid-West remained one. The powers of the new regions were undefined, but the central government possessed supreme authority. Gowon immediately appointed 12 military governors for the new regions.

This was the final insult to Ojukwu, since the division of the East left the Ibo landlocked. Furthermore, Ojukwu distrusted the breakup of the North, for he believed that all would act in unison against the Ibo. Since the decision had been made without consultation with his government and was a negation of the Aburi agreements, Ojukwu repudiated it.

Secession. Gowon's reorganization plan, which openly courted the Eastern minorities, nevertheless triggered the Eastern declaration of independence. The Eastern Consultative Assembly announced the creation of the state of Biafra on May 30.

The declaration forced Gowon to abandon a conciliatory approach. A complete blockade of all Biafran ports was announced, military preparations were begun, and Gowon was promoted from lieutenant colonel to major general. Meanwhile, Gowon sought to strengthen his position by appointing civilians to the executive council; Chief Obafemi Awolowo, a Western Region leader who favors loose confederation, became its vice chairman. Finally, on July 6, federal troops invaded Biafra at two points.

Civil War. Despite federal confidence of a quick victory, the fighting was fierce. The Eastern ports of Bonny, Port Harcourt, and Calabar were seized, and the university town of Nsukka invested in late July. In early August, Biafran forces briefly took the initiative, occupied the Mid-West, and reached to within 100 miles (160 km) of Lagos and Ibadan in the Western Region. The federal army, increased to over 40,000 men, blunted this invasion, drove the Biafrans from the Mid-West, and began a counteroffensive. Enugu, the Biafran capital, was taken on October 4.

Ojukwu's army, never larger than 10,000 men, was handicapped by supply problems. Biafra could not buy arms from any foreign state, and with its ports under federal control even surreptitious aid was blocked. The federal government received some MIG fighters from the Soviet Union.

Prospects. Nevertheless, federal successes during the year were peripheral. The heart of the East, with over 6 million Ibo, was not invaded. Biafra thwarted all attempts to take Onitsha. The airfield and other facilities of Port Harcourt remained Biafran, and Biafran troops continued to harass federal forces at Bonny and in the northeast.

As a condition for a cease-fire, Gowon demanded Ibo acceptance of the political arrangements announced in May. The bulk of the Biafran army was intact, and Ojukwu could prolong the war indefinitely by converting it to guerrilla-type operations. Savage reprisals against the Ibo in the federally occupied areas led Conor Cruise O'Brien, the Irish diplomat and former UN officer in Africa, to ask in October for UN intervention to prevent "mass murder on a scale unparalleled as yet in Africa."

The September summit meeting of the Organization of African Unity (OAU) formed a consultative mission, comprising the heads of state of Cameroon, Niger, Ghana, Ethiopia, Liberia, and the Congo (Kinshasa) to pass on the opinions of the OAU to each side and act as mediator. Scheduled to visit Lagos in September, the mission finally arrived in late November with two members absent. Its effect was negligible. By insisting on Nigeria's territorial integrity, the OAU made it impossible for Ojukwu to give the mission serious consideration. Radio Biafra condemned the committee as a "willing tool" of reactionary African leaders, and one spokesman stated that the solution to Nigeria's problems could be settled only on the battlefield.

Economy. The events of 1966 and 1967 have halted Nigerian development. Despite record harvests of groundnuts in the North and cacao in the West, Nigerian exports in 1967 were cut in half. Petroleum production was confined to offshore operations, and palm oil exports almost stopped.

To continue the war, Gowon must pledge a large portion of Nigeria's future. Adul-Atta, federal permanent secretary for finance, stated in October that the cost of arms since July 1967 was $35 million and that the disturbances since January 1966 had cost 10,000 lives and $100 million. The actual cost of displacement and destruction is not measurable.

Harry A. Gailey
San Jose State College

NIXON, Richard Milhous

Former Vice President of the United States: b. Yorba Linda, Calif., Jan. 9, 1913.

On February 1, 1968, Richard Nixon announced that he would seek the Republican presidential nomination in 1968. He said he hoped to establish his claim to the nomination by winning a number of state primary elections. Nixon had sought the presidency once before, in 1960, when he lost to John F. Kennedy.

Presidential Bid. Nixon moved to New York City in 1963 to practice law, but he retained an interest in politics and by early 1967 it was apparent that he was planning another campaign. In March a Nixon for President Committee opened headquarters in Washington, D.C. In New York City, Nixon assembled a personal staff of advisers. They included veterans of the Eisenhower administration as well as younger men relatively inexperienced in politics.

As a candidate, Nixon faced several handicaps. He had not won an election on his own since 1950. He had not built a political base, and he had not won the support of many Republican governors.

But Nixon had several assets. Few questioned his intelligence, energy, or grasp of the issues. His extensive campaigning for congressional candidates had improved his platform approach and earned him wide support among Republican political leaders; and as a middle-roader he could argue that he was best able to unify the party. Polls taken in 1967 showed that he was the top choice for the nomination among Republican voters, county chairmen, and delegates to the 1964 convention.

Foreign Affairs. Nixon traveled abroad extensively in 1967, visiting some 30 countries. He conferred with many world leaders, although Soviet officials snubbed him when he visited Moscow.

U.S. intervention in Vietnam received Nixon's support. He said that the United States must help win the fight against the Communists or risk a world war. He called for increased bombing of North Vietnam and for a blockade of Haiphong harbor. In an article in the October issue of *Foreign Affairs,* he noted that domestic opposition to the war meant that "the role of the United States as world policeman is likely to be limited in the future." Therefore, "nations in the path of China's ambitions [must] move quickly to establish an indigenous Asian framework for their own future security."

Domestic Issues. On December 8, Nixon warned that if the United States could not solve its race problem "it will not matter what happens in Vietnam and elsewhere." He said: "The war at home is a war for survival of a free society." On another occasion he said that his country had become "the most lawless and violent in the history of free peoples." This he attributed to the failure of federal welfare programs and to the "permissiveness" toward and "indulgence" of crime and criminals by many Americans.

Background. Nixon served in the U. S. House of Representatives (1947–51) and in the Senate (1951–52), representing California. He was vice president from 1953 to 1961. He lost contests for the presidency in 1960 and for the California governorship in 1962.

DONALD YOUNG

Author of "American Roulette: The History and Dilemma of the Vice Presidency"

NOBEL PRIZES

The Nobel Prizes for 1967 were presented in Stockholm on December 10 by King Gustaf VI Adolf of Sweden. The ceremony took place on the 71st anniversary of the death of Alfred Bernhard Nobel, the Swedish inventor who established the awards in his will. One author and seven scientists were honored for outstanding achievement in their fields in 1967, and in each category, literature, physics, chemistry, and physiology or medicine, the award was worth the equivalent of about $60,000. The Nobel Peace Committee, which traditionally does not award a prize in times of war or international crisis, withheld the Nobel peace prize for the second consecutive year.

Literature. Miguel Angel Asturias, the Guatemalan ambassador to France, became the second Latin American to win the Nobel Prize for Literature (the first was Gabriela Mistral, a Chilean poet, in 1945). Asturias said that the award was a tribute to all Latin America, and that his work would continue "seeking to give birth to a universal consciousness of Latin American problems." The Swedish Academy, which awarded the prize, cited Asturias' explosive style, marked by a "magic foreign and frightening poetry," as well as the author's "highly colored writings rooted in a national individuality and Indian traditions." Asturias is best known for his novel *The President* (1946), a scathing attack on dictatorship.

Miguel Angel Asturias was born in Guatemala City on Oct. 19, 1899. He graduated from the University of Guatemala in 1923, and later, unhappy with Guatemala after the long dictatorship of Manuel Estrada Cabrera, he went to study at the Sorbonne (his novel on dictatorship, *The President* (1946), contains many recollections of the Estrada Cabrera era). Asturias returned to Guatemala, and from 1946 to 1953, served as diplomat in Mexico, Argentina, France, and finally El Salvador, where he attempted to thwart the uprising of Col. Carlos Castillo Armas against Guatemalan president Jacobo Arbenz Guzmán. When Castillo took power, Asturias went into exile, finally settling in Paris. In 1966, he rejoined the Guatemalan diplomatic service and in 1967 was named ambassador to France.

Several of Asturias' writings attack U. S. intervention in Guatemala, including the trilogy *Strong Wind* (1950), *The Green Pope* (1953), and *Eyes of the Interred* (1960), and the short stories *Weekend in Guatemala* (1955). He also wrote of the Mayan Indians in *Legends of Guatemala,* 1930 and *Men of Corn,* 1949.

Chemistry. The 1967 Nobel Prize in chemistry was awarded to three scientists: half the prize went to Manfred Eigen of the Max Planck Institute for Physical Chemistry; and the other half was shared by Ronald G. W. Norrish and George Porter of Cambridge University. They were honored for "their studies of extremely fast chemical reactions effected by disturbing the equilibrium by means of very short pulses of energy." This work made it possible to analyze reactions that take place in one ten billionth of a second.

Manfred Eigen was born in Bochum, Germany, on May 9, 1927. He studied chemistry and physics at Göttingen University. Eigen is now chairman of the Max Planck Institute for Physical Chemistry in Göttingen. He has traveled extensively in the United States and is a member of the National Academy of Sciences and a visiting lecturer at Cornell University. As part of his studies on reaction kinetics, Eigen used the dissociation of water to examine the rate of formation of hydrogen ions. Eigen is interested in biology, as well as chemistry, and is currently involved in research on the control of enzymes.

Ronald George Wreyford Norrish was born in Cambridge, England, on November 9, 1897. Norrish won a scholarship to Emmanuel College of Cambridge University, in 1915 but left to serve in the Royal Field Artillery during World War I. After the war he returned to Cambridge and graduated in 1921. He received his Ph.D. from Cambridge in 1924. In 1937 he became head of the department of physical chemistry at Cambridge and held that post until 1965.

KEYSTONE

NOBEL PRIZE WINNERS (*left to right, seated*): Ragnar Granit, Haldan Hartline, and George Wald (medicine); Miguel Asturias (literature); (*standing*) Ronald Norrish, Manfred Eigen, and George Porter (chemistry); Hans Bethe (physics).

George Porter was born in Stainforth, Yorkshire, England, in 1920. He obtained his B.S. at the University of Leeds in 1941 and his Ph.D. from Cambridge in 1949. At Cambridge he studied and worked with Ronald Norrish. From 1952 to 1954 he was assistant director of the department of physical chemistry at Cambridge. In 1955 he became professor of physical chemistry at the University of Sheffield, and in September, 1967, he became director of the Royal Institute.

Physiology or Medicine. The 1967 Nobel Prize in physiology or medicine was shared by two Americans: Haldan Keffer Hartline of the Rockefeller University in New York City and George Wald of Harvard University, and by a Swede: Ragnar Granit of the Royal Caroline Institute for Medicine and Surgery in Stockholm. They were cited for their discoveries concerning processes in the eye.

Haldan Keffer Hartline was born in Bloomsburg, Pa., on Dec. 22, 1903. He received his M.D. at Johns Hopkins University in 1927. From 1949 to 1953 he was chairman of the Jenkins Department of Biophysics at Johns Hopkins and in 1953 joined the Rockefeller Institute for Medical Research (as it was then called). Interested in the electrical features of vision, Hartline recorded the electrical impulses of nerve cells and fibers when light hits the retina and explained how the eye sharpens contrasts and differentiates shapes.

George Wald was born in New York City on Nov. 18, 1906. He studied at New York University and at Columbia University, where he received his Ph.D. in 1932. He joined the faculty of Harvard University in 1934 and became professor of biology in 1948. Studying vision as a chemical reaction, Wald showed how light activates photoreceptive cells in the retina. He also showed the importance of vitamin A in visual processes.

Ragnar Granit was born in Finland on Oct. 30, 1900. He received his M.D. from Helsinki University in 1927 and taught there from 1929 to 1937. In 1940 he joined the Royal Caroline Institute of Medicine and Surgery and became its director in 1945. He has taught and lectured at several British and American universities and is presently visiting professor of neurophysiology at St. Catherine's College in Oxford, England. Interested in color perception, Granit has shown how different units of the retina react to different parts of the spectrum.

Physics. The 1967 Nobel Prize in physics was awarded to Hans Bethe of Cornell University for his theoretical studies of the processes from which the sun derives its energy. Professor Bethe was able to show that four hydrogen nuclei could combine to form one helium nucleus releasing a large quantity of energy. This answered a question which had been asked by scientists nearly a century before: where does the sun get its energy? If it were from conventional chemical reactions the sun would have burned out long ago. By proposing a nuclear reaction with its large energy release Bethe was able to supply the answer to this puzzle.

Hans Bethe was born in Strasbourg (Alsace-Lorraine was then a part of Germany), on July 2, 1906. He studied physics at the universities of Frankfurt and Munich, obtaining his Ph.D. at Munich in 1928. After working as instructor there and later at the universities of Stuttgart and Frankfurt, he went to Cambridge and worked under the direction of Rutherford. He has since held a large number of academic posts in England and the United States. It was during 1937 and 1938, while at Cornell University, that Professor Bethe carried out his Nobel Prize-winning work. In addition to his work on nuclear physics he has made significant contributions to the fields of the quantum theory of atoms, the theory of metals, the quantum theory of collisions, meson theory, quantum electrodynamics and shock wave theory. In addition to the many other honors bestowed upon him, Bethe received the U. S. Medal of Merit in 1946, the Max Planck Medal in 1955, and the Enrico Fermi Prize in 1961.

NORTH ATLANTIC TREATY ORGANIZATION

NATO underwent fundamental changes in 1967. The year was one of profound physical and psychological adjustment as the allies reacted to France's decision, announced in 1966, to evict the NATO military organization and all troops not under French command.

Effects of French Action. The upheaval within NATO had at first appalled the 14 other NATO member states. Indeed the changes brought about in 1967 by President de Gaulle marked the end of an era for NATO. But the results were not all negative. For several years French foot-dragging in the alliance, and apprehensions about the intentions of the president of France toward it, had had a paralyzing effect on the organization. By the beginning of 1967, however, the apprehension and the waiting were over, and the absence of French participation in policy planning proved beneficial.

By fall, NATO headquarters and NATO troops were outside of France, and France for all practical purposes was outside of NATO. Many informed observers believed that France would withdraw from the North Atlantic Treaty itself when its 20-year obligation as a signatory ended in April 1969.

De Gaulle did not announce any such intention. He made a distinction between the mutual defense treaty itself and the elaborate organization later founded upon it, which he claimed was no longer necessary. Even if France were to withdraw from the basic treaty, it appeared that the other allies would remain. Once the definitive French break was made, the other allies faced the future with resolution, courageous planning, and a cheerful determination that would have seemed, in the years before 1967, an unlikely outcome of the crisis.

Movement from France. The process of completely removing NATO headquarters and personnel from France was completed by April 1, 1967, as requested by the French government. On March 30, SHAPE (Supreme Headquarters, Allied Powers, Europe), the alliance's integrated command in Europe, left Rocquencourt, near Paris, where it had been for 15 years, and the next day it was formally installed at Casteau, near Mons, Belgium. This became the command post of the supreme allied commander, Gen. Lyman Lemnitzer.

Also during March, AFCENT (Allied Forces Central Europe Command) was moved from Fontainebleau to Brunssum, the Netherlands, and the AFCENT commander, General Count von Kielmansegg, reorganized his command, abolishing the two former subcommands, AIRCENT and LANDCENT.

France had made no demand that NATO move its civil organization from its specially built edifice at the Porte Dauphine, Bois de Boulogne, Paris. At first the allies hesitated, fearing to exacerbate relations with de Gaulle further. However, at the North Atlantic Council meeting in December 1966 the decision was made to move the civil staff also. It would be hard to exaggerate the potential awkwardness of having SHAPE in Brussels and the secretary-general, Atlantic Council, and staff still in the unfriendly atmosphere of Paris.

On Oct. 16, 1967, the secretary-general, Manlio Brosio of Italy, and his staff began work in their new buildings at Evere, near Brussels airport, pending construction of a new permanent headquarters at a site in Brussels. Meanwhile NATO and the French government continued an acrimonious dispute over the payments to be made by France to NATO for the organization's former building in Paris.

Spring Council Meeting. The regular spring ministerial meeting of the North Atlantic Council was held in Luxembourg on June 13-14. On East-West relations, the council recorded its view that the détente should be extended. It also welcomed the attempt of the West German government to increase contacts with East Germany and expressed its hope of seeing progress made in disarmament and arms control. The ministers also took note of an interim report on the future tasks of the alliance, and of a report on the problem of technological disparities between different countries and different areas.

Nuclear Planning Group. At the council meeting in December 1966 two permanent bodies for nuclear planning had been established: a policy body, the Nuclear Defense Affairs Committee, and an inner planning group of seven members, the Nuclear Planning Group. The first meeting of the latter, held in Washington on April 6-7, 1967, was attended by the defense ministers of Britain, Canada, West Germany, Italy, the Netherlands, Turkey, and the United States. Secretary-General Brosio was chairman. U.S. Defense Secretary Robert S. McNamara led a discussion of the strategic nuclear forces of the alliance. The use of tactical nuclear weapons was also discussed, the Turkish delegate raising the possibility of laying a nuclear minefield on the Soviet-Turkish frontier, a project requiring U.S. support.

The Nuclear Planning Group met again at Ankara, Turkey, in September, when Secretary McNamara announced that the United States intended to create a limited anti-ballistic missile (ABM) system. The decision aroused resentment among NATO allies because it was made without consultation.

Tripartite Agreement on Troops and Costs. On April 28, 1967, after more than six months of negotiation, Britain, West Germany, and the United States signed an agreement by which the United States and Britain will withdraw about 35,000 and about 6,500 troops, respectively, from Germany. When the redeployments are completed sometime in 1968, the United States will have 225,000 troops remaining in West Germany, and Britain will have 59,000.

Soviet Mediterranean Activities and NATO. Soviet naval and political activities in the Mediterranean caused increasing disquiet to the NATO allies in 1967. The Soviet's westward push threatened to outflank NATO defenses in southern Europe. Soviet naval forces in the Mediterranean rivaled the U.S. Sixth Fleet and frequently trailed it. The situation was worsened by de Gaulle's decision to hand over the great naval base of Mers-el-Kebir (Oran) to Algeria at the end of 1967—10 years earlier than required by the Evian agreement of 1962 between the two countries. Soviet forces and technicians were already in evidence in Algeria, and the USSR is expected to inherit this former citadel of French naval power. There is an additional irony in the fact that Algeria was included in the area whose integrity was guaranteed by the North Atlantic Treaty in 1949.

Future of NATO. Broad political questions that had obviously arisen about the future of NATO began to be studied intensively in 1967. The inquiries were called the "Harmel studies" because they were originally suggested by Pierre Harmel, Belgian foreign minister. A special group was set up in February to conduct the studies. It set up four subgroups—on East-West relations, inter-allied relations, general defense policy, and relations with other countries. The first subgroup meetings took place in April. The special group made a report to the North Atlantic Council's ministerial meeting in Brussels in December.

(See also EUROPE.)

ARTHUR C. TURNER
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NORTH CAROLINA

North Carolina in 1967 mourned the loss of one of its most distinguished residents, the poet Carl Sandburg, who died at his home near Flat Rock on July 22 (see SANDBURG).

In the longest legislative session (February 8 to July 6) in the state's history, the General Assembly settled more major controversial issues than any other Assembly in modern times.

General Legislation. The 1967 Assembly legalized "brown bagging"—a custom of 30 years' standing in North Carolina in which people carry liquor to restaurants or clubs for consumption there—but bills to permit sale of liquor by the drink were defeated. Other major enactments included an abortion law, with a 4-month residency requirement and strong medical safeguards, and an enlightened law relating to epileptics. New antiterror laws make it a felony to burn crosses or wear masks for the purpose of intimidation or to burn occupied dwellings. The laws also allow the governor to offer rewards up to $10,000 for information leading to arrest and conviction of felons. (On July 18, federal agents, assisted by work of the state bureau of investigation, arrested 12 persons and charged them with a terror campaign to prevent school integration in two counties.)

Congressional Redistricting. On the question of court-ordered realignment of North Carolina's 11 congressional districts, the Assembly adopted a plan that created two districts without present incumbents and two districts with two incumbents each (a Republican and a Democrat in each case).

NORTH CAROLINA • Information Highlights

Area: 52,712 square miles (136,524 sq km).
Population: 5,027,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Raleigh, the capital, 104,000; Charlotte, 230,000; Winston-Salem, 139,000; Greensboro, 136,000.
Government: *Chief Officers*—governor, Dan K. Moore (Democrat); lt. gov., Robert W. Scott (D); secy. of state, Thad Eure (D); atty. gen., Wade Bruton (D); treas., Edwin Gill; supt. of pub. instr., Charles F. Carroll; chief justice, R. Hunt Parker. *Legislature*—(convened Feb. 8, 1967): Senate, 50 members (7 Republicans, 43 Democrats); House of Representatives, 120 members (26 R, 94 D).
Education: *School enrollment* (1966–67)—public elementary, 869,548 pupils (34,377 teachers); public secondary, 338,503 pupils (16,361 teachers); nonpublic (1965–66), 22,100 pupils (1,220 teachers); college and university (fall 1965), 110,977 students. *Public school expenditures* (1965–66)—$419,000,000 ($379 per pupil); average teacher's salary, $5,337.
Public Finance (fiscal year 1966–67): *Revenues,* $826,939,021 (3% sales tax, $201,641,570; motor fuel tax, $146,546,095; federal funds, $62,397,557). *Expenditures,* $753,936,277 (education, $409,449,525; health, welfare, and safety, $53,656,608; highways, $192,557,928). *State debt,* $341,285,000 (fiscal year 1966–67).
Personal Income (1966): $11,321,000,000; average annual income per person, $2,277.
Public Assistance (fiscal year 1967): $96,879,400 (aged, $32,082,776; dependent children, $35,229,200).
Labor Force (employed persons, July 1967): *Agricultural,* 498,000; *nonagricultural* (wage and salary earners, 1,501,000 (41.9% manufacturing, 17.8% trade, 13.2% government). *Unemployed persons* (July 1967)—101,700.
Manufacturing (1967): Value added by manufacture, $6,500,000,000 (1965, primary metals, $64,351,000; nonelec. machinery, $171,123,000; elec. machinery, $373,386,000; fabricated metals, $121,132,000; food and products, $359,946,000).
Agriculture (1966): *Cash farm income,* $1,358,003,000 (livestock, $479,701,000; crops, $815,486,000; govt. payments, $62,816,000). *Chief crops* (tons)—tobacco, 386,013 (ranks 1st among the states); peanuts, 202,800 (rank, 2d); sweet potatoes, 149,500 (rank, 2d); corn for grain, 1,707,300.
Mining (1966): *Production value,* $71,878,000. *Chief minerals* (tons)—stone, 22,377,000; sand and gravel, 11,601,000; clays, 3,381,000; feldspar, 338,240.
Fisheries (1966): *Commercial catch,* 245,484,687 pounds ($9,543,757). *Leading species*—menhaden, 182,288,821 pounds ($2,537,808); blue crabs, 18,914,043 pounds ($867,932); shrimp, 5,697,297 pounds ($2,565,981).
Transportation: *Roads* (1967), 84,406 miles (135,809 km); *motor vehicles* (Dec. 1966), 2,587,117; *railroads* (1966), 6,439 track miles (10,362 km); *airports with scheduled service* (1966), 47.
Communications: *Telephones* (1966), 1,625,100; *television stations* (1967), 16; *radio stations* (1967), 190; *newspapers* (1967), 47 (daily circulation, 1,208,131).

The Courts. The 1967 Assembly passed more laws of major significance to the courts and court officials than any other North Carolina Assembly in a century. It activated a constitutionally authorized intermediate court of appeals, and five judges were appointed to the new court. Five additional regular judgeships were authorized, bringing the number of regular superior court judgeships to 40. Also adopted was a uniform jury selection law.

State Agencies. Thirteen new state agencies were added to the some 200 existing agencies. Among these are a department of correction (replacing the old prison department) and a board and department of water and air resources.

Education. The Assembly voted a 20% pay increase for public school teachers. On the matter of university status, the Assembly first rejected the bid of East Carolina College (a state college at Greenville) to become a regional university outside the consolidated University of Carolina system. Then the Assembly proceeded to create four regional universities, including East Carolina. Others to be changed from state college to regional university status are Agricultural and Technical College of North Carolina (Greensboro), Appalachian State Teachers College (Boone), and Western Carolina College (Cullowhee).

Finance and Taxation. The $2.8 billion budget approved by the Assembly was $500 million higher than any previous budget. Following the recommendations of Gov. Dan K. Moore, the state income tax base was revised to give certain classes of taxpayers an immediate tax cut of $23.5 million.

The Economy. In general, North Carolina had an excellent year. Cash farm income amounted to about $1.4 billion. Industrial development in 1967 was well ahead of that in 1966, which had set a record.

HUGH T. LEFLER
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NORTH DAKOTA

Democrat William L. Guy, in a record seventh year as governor, worked with an overwhelmingly Republican legislature to restore solvency to the general fund in 1967. The state had lacked an adequate tax program since 1965, when a Democratic-sponsored tax plan was defeated in a referendum vote.

Legislation. The state legislation increased the sales tax from 2¼% to 3% over Governor Guy's veto. The tax will pay for a $7 million increase in state aid to local schools and for college building funds. Despite the increased aid to schools, North Dakota ranked 27th among the states in financial support of higher education. Record state income revenue, the result of a second billion-dollar income year in 1966, also helped to restore the general fund.

The legislature proposed two constitutional amendments to be presented to the voters in 1968. The first increases the number of signatures required for an initiated measure to amend the constitution—from 20,000 to 5% of the population at the last census (about 32,500). The second would make the State Board of Higher Education more responsive to the legislature.

Industry and Agriculture. Both industry and agriculture enjoyed a good year in 1967. A 21% increase in acreage brought in an all-time record wheat harvest, estimated at 184,172,000 bushels.

NORTH DAKOTA • Information Highlights

Area: 70,665 square miles (183,023 sq km).
Population: 639,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Bismarck, the capital, 31,800; Fargo, 50,500; Grand Forks, 37,000; Minot, 35,800; Jamestown, 16,800; Williston, 12,300; Dickenson, 11,400; Mandan, 11,200.
Government: *Chief Officers*—governor, William L. Guy (Democrat); lt. gov., Charles Tighe (D); secy. of state, Ben Meier (R); atty. gen., Helgi Johanneson (R); treas., Walter Christensen; supt. of pub. instr., M. F. Peterson; chief justice, Obert C. Teigen. *Legislature*—(met Jan. 3, 1967 for sixty days): Senate, 49 members (43 Republicans, 5 Democrats, 1 other); House of Representatives, 98 members (83 R, 15 D).
Education: *School enrollment* (1965–66)—public elementary, 100,500 pupils (4,067 teachers); public secondary, 52,900 pupils (2,920 teachers); nonpublic schools, 23,000 pupils (1,060 teachers); college and university (fall 1965), 22,470 students. *Public school expenditures* (1965–66)—$63,500,000 ($460 per pupil); average teacher's salary, $5,120.
Public Finance (fiscal year 1967): *Revenues*, $203,958,747 (2.25% sales tax, $23,729,195; motor fuel tax, $20,862,055; federal funds, $55,299,265). *Expenditures*, $205,751,953 (education, $55,193,227; health, welfare, and safety, $33,634,182; highways, $55,914,905).
Personal Income (1966): $1,533,000,000; average annual income per person, $2,384.
Public Assistance (fiscal year 1967): $18,732,361 to 17,367 recipients (aged, $4,084,254; dependent children, $4,606,843).
Labor Force (employed persons, July 15, 1967): *Agricultural*, 96,000; nonagricultural (wage and salary earners), 177,810 (5% manufacturing, 24.1% trade, 23.4% government). *Unemployed persons* (July 15, 1967)—8,570.
Manufacturing (1965): Value added by manufacture, $94,138,000 (transportation equipment (1963), $134,000; printing and publishing, $13,267,000; nonelectrical machinery, $8,884,000; stone, clay, and glass, $5,063,000; food and products, $35,173,000).
Agriculture (1966): *Cash farm income*, $769,622,000 (livestock, $271,116,000; crops, $461,049,000; govt. payments, $137,457,000). *Chief crops* (tons)—wheat, 4,727,580 (ranks 2d among the states); barley, 2,128,256 (rank, 1st); flaxseed, 382,032 (rank, 1st); rye, 183,176 (rank, 1st); hay, 4,512,000; oats, 1,283,136; potatoes, 668,750.
Mining (1966): *Production value*, $97,572,000. *Chief minerals* (tons)—sand and gravel, 7,700,000; lignite, 3,400,000; stone, 356,000; clays, 78,000; uranium ore, 14,100,000; crude petroleum, 27,110,000 barrels.
Fisheries (1965): *Commercial catch*, 333,000 pounds ($25,000).
Transportation: *Roads* (Dec. 1966), 106,884 miles (171,976 km); *motor vehicles* (1966), 41,513; *railroads* (1966), 6,286 track miles (10,116 km); *airports with scheduled service* (1966), 8.
Communications: *Telephones* (1966), 262,900; *TV stations* (1967) 10; *radio stations* (1967), 32; *newspapers* (1966), 10 (daily circulation, 180,671).

North Dakota outbid Minnesota for a new $20 million sugar beet refinery that is expected to add $40 million annually to the economy of the Red River Valley. The Holly Sugar Corporation chose a site on the Sheyenne River near Harwood for its new factory. The corporation was offered a 5-year exemption from real estate taxes.

The state and 18 counties shared $1,020,836 in damages from Armco Drainage and Metal Products, Inc., of Middletown, Ohio, which was found guilty of conspiracy to fix prices on corrugated culverts sold in 1960. George Cox of Grand Forks, founder of a chain of bakeries and retail bakery stores, went bankrupt, owing over $1 million in notes payable. Of this amount $428,770 was due to the North Dakota State Mill and Elevator.

Water Projects. The statewide water resources plan made excellent progress in 1967, with new construction, modification, and repair under way on 24 projects in 20 counties. Matejcek Dam on the Forest River 6 miles south of Lankin, completed in 1967, is the fifth of seven dams planned. In addition to the seven dams, which will hold 8,775,000 gallons of water for flood prevention, recreation, and wild life, the long-range water resources plan includes provisions for 148 miles of river channel improvements.

Blizzard. A two-day blizzard struck western North Dakota on April 30, causing over $500,000 damage.

FELIX J. VONDRACEK
University of North Dakota

NORTHWEST TERRITORIES

The most important event of 1967 for the Northwest Territories was the announcement in January by Arthur Laing, minister of Indian affairs and northern development, that Yellowknife was established as the capital of the Northwest Territories, effective May 1, 1967, and that the territorial government would move from Ottawa to Yellowknife.

Government Development. With movement of the government of the Northwest Territories occurring in the fall of 1967, the territorial administration assumed responsibility for most provincial services. Exceptions included education, welfare, and engineering services, which continue to be administered by the Department of Indian Affairs and Northern Development. It is expected that within a few years the territorial administration will take over all provincial functions except those relating to natural resources. Meanwhile, the Northern Health Service continues to administer the health program for the Northwest Territories.

Representation was given to all areas in 1966, when three new constituencies in the Eastern Arctic increased the elected membership of the Council from 4 to 7, in addition to the five appointed members. Formerly, one session of the council was held in Ottawa and another in the territories. However, with the movement of the government of the Northwest Territories to Yellowknife, both of these sessions will be held each year in the capital.

The plan by which the territorial government assumed more responsibility for administering territorial programs resulted from a report of an advisory commission headed by A. W. R. Carrothers, dean of law at the University of Western Ontario. The commission had been established in 1965.

Mining. A 1967 estimate of tungsten production promised to maintain Canada's position as third largest producer (after the United States and South Korea) among non-Communist nations. All the production of tungsten is from the Canadian Tungsten Mining Corporation, Ltd., in the Northwest Territories. In late December 1966, a fire at the mill of the Flat River mine at this property greatly reduced output, but in late 1967 production was resumed.

STUART M. HODGSON
Commissioner, Northwest Territories

NORTHWEST TERRITORIES • Information Highlights

Area: 1,304,903 square miles (3,397,703 sq km).
Population: 28,738 (1966 census).
Chief Town (1966 census): Yellowknife, 3,741, the capital as of May 1, 1967.
Government: *Chief Officers*—Commissioner, Stuart M. Hodgson; Deputy Commissioner, John H. Parker. *Legislature*, Territorial Council, 12 members (7 elected locally, 5 appointed).
Education: *School enrollment* (1963–64 est.)— public elementary and secondary, 869 pupils (43 teachers); Indian (federal) schools, 5,391 pupils (289 teachers). *Public school expenditures* (fiscal year 1962)—$1,033,000.
Public Finance (1964–65 est.): *Revenues* $6,218,965 (liquor profits, $1,170,951; gasoline and fuel oil tax, $709,615; game management, $44,941). *Expenditures*, $6,808,898 (education, $1,686,729; health and welfare, $2,449,296; municipal affairs and development, $401,610).
Public Assistance (for 12 months ending March 31, 1966): $222,080 (aged and blind, $106,032; dependents and unemployed, $116,038).
Mining (1966 est.): *Production value*, $112,408,680. *Chief minerals*—zinc, 180,000 short tons (ranks 2d among the provinces); lead, 115,000 tons (ranks 1st); gold, 417,841 troy ounces (ranks 3d); tungsten, 1,966 tons (ranks 1st); silver, 1,951,634 troy ounces (ranks 6th).
Transportation: *Roads* (1965), 534 miles (859 km); *motor vehicles* (1965), 5,403; *railroads* (1966), 339 track miles (546 km); *licensed airports* (1966) 15.
Communications: (1965): *Telephones*, 3,946; *radio stations*, 4; *newspapers*, 4.

NORWAY

Norway's almost unbroken postwar prosperity continued through 1967, apparently unaffected by the economic stagnation in many other West European countries. Production and employment rose in Norway, and there were no major labor disputes during the year.

From midyear on, however, the rise in exports began to slow down in the face of poor demand for Norwegian products in key markets, particularly West Germany. With imports still booming, the trade gap widened. This was partly offset by higher invisible earnings from the merchant fleet as freight rates soared after the Middle East war and the closure of the Suez Canal.

International Economics. Norway filed a formal application to join the European Economic Community (EEC) on July 25. The Storting (Parliament) had approved the move by a large majority on July 13, after a three-day debate. As the year ended, however, negotiations on the application still had not started.

As a member of the European Free Trade Association (EFTA), Norway abolished its remaining duties on most industrial goods effective Jan. 1, 1967. EFTA membership has boosted Norway's trade with its Scandinavian neighbors.

In the final phases of the Kennedy Round tariff talks in Geneva in 1967, a single Scandinavian team, headed by a Swede, negotiated for all four Nordic countries (Norway, Sweden, Denmark, and Finland). This was the first time the four countries had stood together in international tariff negotiations. By thus joining forces, they achieved concessions from the EEC bloc that they probably could not have won otherwise.

Elections. In the second year of its four-year term, the non-Socialist coalition government faced its first popularity test when municipal elections were held in September. Results were inconclusive, however, with only minor changes in the relative strength of the various parties. The four coalition parties under Prime Minister Per Borten held their share of the total vote. As usual, Labor had the biggest single share—over 44% of the total. Parliamentary elections are not due until the autumn of 1969.

Shipping Industry. Encouraged by the boom in freight rates, which followed the Israeli-Arab war in June, Norwegian shipowners joined a world rush to contract new tanker tonnage. The orders were for "super" ships in the 200,000 to 250,000 deadweight ton class and went to shipyards in Japan, Sweden, France, and Norway itself. Pessimists in Norwegian shipping circles asked whether there would be employment for all the new ships when they were delivered—in two to four years' time. Late in 1967 the Norwegian merchant fleet totaled 18 million gross tons—some 2 million gross tons above the figure for the previous year.

Oil Exploration and Production. Several groups of oil companies joined the search for undersea oil and gas off Norway's west coast. Esso Exploration Norway had been first in the field with a borehole sunk in 1966. As of the end of 1967, however, no finds worth exploiting were reported.

Shell's Norwegian subsidiary, A/S Norske Shell, began test production in the autumn at a new refinery near Stavanger on the west coast. With an annual output of 2 million metric tons, it will raise Norway's refining capacity by some 70% when operating at full production. Norway's two other refineries, both owned by A/S Norske Esso, are in eastern Norway on the Oslo Fjord.

Foreign Affairs. Defense Minister Otto Grieg Tidemand paid an official visit to the Soviet Union in the autumn. Tidemand was the first defense minister of a NATO country to visit the USSR.

King Olav V of Norway toured South America for three weeks in September, paying state visits to Brazil, Chile, and Argentina. The Norwegian royal house has family links with Brazil. The King's oldest daughter, Princess Ragnhild, is married to shipowner Erling Lorentzen, who lives in Brazil to manage his shipping and business interests there.

Nobel Prize. For the second year in succession, the Nobel Committee of the Norwegian Storting could not agree on a suitable candidate for the peace prize. It decided not to award the prize for 1966, and the money reverts to the committee's

NORWAY • Information Highlights

Area: 125,181 square miles (324,219 sq km).
Population: 3,769,000 (Jan. 1, 1967 est. for 1965).
Chief Cities (1964 est.): Oslo, the capital, 484,711; Bergen, 116,876; Sör-Tröndelag, 111,419.
Government: *King*—Olav V (b. 1903; acceded 1957); *Prime Minister*—Per Borten (took office Oct. 12, 1965). *Parliament*—Storting, 150 members (party seating, 1967: Labor, 68; Conservative, 31; Center (Farmers), 18; Liberal, 18; Christian People's, 13; Socialist People's, 2).
Religious Faiths: Evangelical Lutherans, 96% of population.
Education: *Literacy rate* (1962), 99% of population. *Total school enrollment* (1964)—662,217 (primary, 414,689; secondary, 180,889; teacher-training, 7,168; technical, 42,401; higher, 17,070).
Finance (1966 est.): *Revenues,* $1,562,000,000; *expenditures,* $1,672,000,000; *public debt* (1964), $1,556,000,000; *monetary unit,* krone (7,14286 kroner equal U. S.$1).
Gross National Product (1966): $7,620,200,000.
National Income (1966): $5,834,000,000; average annual income per person, $1,556.
Economic Indexes (1966): *Industrial production,* 159 (1958=100); *agricultural production* (1965), 101 (1956=100); *cost of living,* 129 (1958=100).
Manufacturing (metric tons, 1965): Wood pulp, 1,839,000; cement (1966), 1,716,000; crude steel (1966), 715,200; paper, 606,000; aluminum (1966), 330,000.
Crops (metric tons, 1967): Potatoes (1966), 1,090,000; barley, 486,000; oats, 107,000; apples (1965), 43,000.
Minerals (metric tons, 1965): Magnesium, 25,000 (ranks 3d among world producers); limestone (1964), 4,000,000; iron ore (1966), 2,364,000; pyrites, 709,168; coal (1966), 410,400; quartz (1964), 410,000.
Foreign Trade (1966): *Exports,* $1,563,500,000 (chief exports: manufactured goods, $356,440,000; aluminum, $169,120,000; fish, $147,560,000; paper, $126,980,000); *imports,* $2,403,660,000 (chief import: ships, $336,280,000). *Chief trading partners* (1965): Sweden (took 16% of exports, supplied 22% of imports); West Germany (took 14% of exports, supplied 16% of imports); Britain (took 18% of exports, supplied 13% of imports).
Transportation: *Roads* (1964), 33,324 miles (53,628 km); *motor vehicles* (1965), 600,067 (automobiles, 465,243); *railways* (1965), 2,702 miles (4,348 km); *merchant vessels* (1966), 1,356 (16,568,000 gross registered tons); *national airline,* Scandinavian Airlines System (SAS).
Communications: *Telephones* (1966): 907,919; *television stations* (1965), 22; *television sets* (1965), 488,000; *radios* (1965), 1,088,769; *newspapers* (1965), 84.

funds. The prize for 1967 is being held over for a year. (See also NOBEL PRIZES.)

THOR GJESTER
"Norwegian Journal of Commerce and Shipping," Oslo

NOVA SCOTIA

The Progressive Conservative government of Nova Scotia's Premier Robert L. Stanfield, in power since 1956, successfully retained office in the election held in May 1967. The Conservatives captured 40 of the 46 seats in the Legislative Assembly, while the Liberals took the other six seats. None of the 24 New Democratic party candidates were elected.

New Premier. Four months after his reelection, Stanfield was chosen federal party leader of the Progressive Conservative party. He then resigned as premier of Nova Scotia. George I. Smith, minister of finance and economics, took office in September as the new premier and leader of the Progressive Conservative party. In November, Stanfield was elected to the federal Parliament.

Economy. The Nova Scotian economy experienced mixed growth in 1967. Labor income was up, but while employment increased a greater increase in the potential labor force caused unemployment to rise. Farm cash income, too, was up slightly, but the dollar values of fish landings, lumber production, and pulp production dropped considerably. Coal and other mineral production decreased slightly. There were mild gains in the remaining commodity sectors, electric power, and manufacturing but moderate declines in both residential construction and the value of construction contracts awarded.

NOVA SCOTIA • Information Highlights

Area: 21,425 square miles (55,491 sq km).
Population: 756,039 (1966 census).
Chief Cities (1966 census): Halifax, the capital 86,792; Dartmouth, 58,745; Sydney, 32,767; Glace Bay, 23,516.
Government: *Chief Officers*—lt. gov., Henry P. MacKeen; premier and min. of finance, George I. Smith (took office September 1967; Progressive Conservative); prov. secy., Gerald J. Doucet (PC); atty. gen., R. A. Donohoe (PC); min. of educ., E. D. Haliburton (PC); chief justice, J. L. Ilsley. *Legislature*—Legislative Assembly (convened February 1968); 46 members (40 Progressive Conservative, 6 Liberal).
Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 197,496 pupils (7,638 teachers); private schools, 6,201 pupils (300 teachers); Indian (federal) schools, 818 pupils (33 teachers); college and university (fall 1966), 9,806 students. *Public school expenditures* (1963)—$52,970,000 ($303 per pupil).
Public Finance (fiscal year 1967 est.): *Revenues*, $163,480,000 (sales tax, $49,872,000; income tax, $27,281,000; federal funds, $56,039,000). *Expenditures*, $182,350,000 (education, $49,960,000; health and social welfare, $51,290,000; transport and communications, $36,810,000).
Personal Income (1966 est of total): $1,197,000,000.
Public Assistance (fiscal year 1967 est.): $10,680,000 (aged and blind, $1,920,000; dependents and unemployed, $5,210,000).
Manufacturing (1964): Value added by manufacture, $211,140,000 (transportation equipment, $28,238,000; paper, allied industries, $23,413,000; food, beverages, $54,117,000).
Agriculture (1966 est.): *Cash farm income*, $55,556,000 (livestock, $42,641,000; crops, $10,029,000; govt. payments, $412,000). *Chief crops* (cash receipts)—fruits, $4,792,000 (ranks 4th among the provinces); potatoes, $1,814,000; vegetables, $1,759,000 (ranks 5th).
Mining (1966 est.): *Production value*, $77,301,086. *Chief minerals* (short tons)—coal, 3,900,000 (ranks 1st among the provinces); sand and gravel, 7,896,332 (ranks 5th); gypsum, 4,542,851 (ranks 1st); salt, 447,805 (ranks 2d).
Fisheries (1966): *Commercial catch*, 693,347,000 pounds ($45,470,000). *Chiefly*—lobsters, 15,996,000 pounds ($9,447,000); scallops, 17,859,000 pounds ($7,290,000).
Transportation: *Roads* (1965), 16,732 miles (26,925 km); *motor vehicles* (1965), 233,653; *railroads* (1966) 1,313 track miles (2,113 km); *licensed airports* (1966) 6.
Communications: *Telephones* (1965) 224,103; *television stations* (1967) 3; *radio stations* (1966) 15, *newspapers* (1966), 6 (daily circulation, 159,525).

DEUTERIUM CORPORATION OF NEW YORK

HAROLD C. UREY (*right*), discoverer of deuterium, and Deuterium Corporation president Jerome S. Spevack open the corporation's heavy water plant at Glace Bay, N. S.

Important New Industries. British American Oil Ltd. announced plans to build a $40 million oil refinery, and Canadian Industries Ltd. and Nova Scotia Pulp Ltd. announced plans to build a $7 million plant for the production of pulping chemicals. Both plants are to be located at Point Tupper on the Canso Strait.

New Industrial Plants. Industrial complexes commencing operations during 1967 included the following: Deuterium of Canada Ltd.'s $83 million heavy water plant at Glace Bay; a $50 million pulp mill at Abercrombie Point, near New Glasgow, operated by Scott Maritimes Pulp Ltd.; a $4 million plant to produce primary abrasives at Point Edward, in Cape Breton County, operated by Pyrominerals Ltd.; and General Instrument Corporation's $1 million plant which will produce scientific and delicate instruments and employ over 400 workers.

Coal and Steel. The federal government announced establishment of the Cape Breton Development Corporation, charged with the responsibility of phasing out, over the next 15 years, the coal mines in Cape Breton, which employ over 4,000 miners.

Major Legislation. On April 1, 1967, the Municipal Services Act came into force, permitting the province to assist municipalities in paying the cost of certain services. The Housing Corporations Act empowered municipalities to establish wholly owned, nonprofit housing corporations. A Trust and Loan Corporations Act requires the registration of certain groups which have substantially the powers set out in the Trust and Loan Companies Acts and which accept money for deposit before carrying on business. The act contains extensive provisions for the registration, inspection, and control of such corporations, including the maintenance of security deposits and deposit insurance.

ANDREW S. HARVEY
Dalhousie University

NUCLEAR ENERGY. See ATOMIC ENERGY; PHYSICS.

NUTRITION

If current predictions about the population explosion and inadequate food production prove to be correct, serious consideration must be given to the effective utilization, from a nutritional standpoint, of the food supplies presently available. Even now there are large areas of the world where food is nutritionally inadequate, either in calories or protein or both. A great deal of attention has been devoted to India and Africa, where inadequate nutrition is a chronic condition. Occasionally the situation worsens. For example, in Bihar, India, a severe drought from 1965 through 1967 markedly reduced the food supply, which was limited even during years of favorable conditions.

President's Panel on World Food Needs. The problem of future world food supplies looms so large that President Johnson, in his State of the Union message to the Congress on Jan. 10, 1967, said: "Next to the pursuit of peace, the really greatest challenge to the human family is the race between food supply and population increase. That race tonight is being lost." To determine how the United States could best cope with this situation, the President appointed a special panel to investigate the problem. The findings of this panel were published in a report entitled *The World Food Problem.*

In the report, the panel points out that despite the expenditure of billions of dollars for foreign aid, the donation of millions of tons of food, and the activities of many private and international organizations, "there are more hungry mouths in the world today than ever before in history." The panel also states that the present problem stems from an uneven distribution of food among countries and among economic groups within each country. Although statistical surveys suggest that enough food is produced in the world to supply each individual with an adequate intake of calories and protein, a proportionate share of this food is not available in the underdeveloped countries—countries that contain two thirds of the world's population. In these countries, large numbers of people receive inadequate amounts of both calories and proteins.

Predictions of a date when the food crisis may become acute focus on the year 1985. Prior to that date the world population will probably continue to increase at the current, or an even greater, rate. The nutritional requirements will also increase, but at a faster rate because of the high percentage of infants and small children in the present population. The continuing reduction of infant and child mortality means that as these children become older, their demands on the food supply will increase. This trend is not likely to be reversed by any program to control the population growth. Even if such programs became effective immediately, they would not have any significant impact on the food problem before the year 1985.

To alleviate existing malnutrition and to prepare for future needs, the President's panel recommended that efforts be made to improve and extend available food supplies. The panel's report concluded that most of the food required by the underdeveloped nations must come from within the individual countries and be foods that are now commonly part of the diet.

Methods of Solving Protein Deficiency. Various surveys of the nutritional situation in many parts of the world indicate that next to the quantity of food, protein is the nutrient most deficient in human diets. According to Aaron Altschul of the International Nutrition Improvement Program of the U. S. Department of Agriculture, about half the children in the world do not receive an adequate intake of protein, and it is estimated that by 1970 the deficit of dietary protein will be 10 million tons.

One method of improving the quality of protein in the diet is to add those amino acids that are deficient in the protein. Amino acids are the building blocks of all protein. About 10 of these acids must be furnished in the diet because they cannot be synthesized by the body. Another method is simply to provide larger quantities of those foods whose proteins contain only small amounts of some essential amino acids The latter method is not the most efficient way to utilize the available proteins, but since many children also suffer from a lack of energy, the increased food intake would undoubtedly help in other ways.

For many years the proteins in wheat flour and other plant products were considered to be of such poor quality that they had to be used with animal proteins, such as milk, meat, and eggs, in order to provide an adequate diet. Recent studies at Michigan State University have shown, however, that wheat flour in the form of white bread, rolls, or spaghetti, when present in the diet at adequate levels, will serve as a good source of protein for college students. Although the protein in wheat flour is deficient in the essential amino acids lysine and threonine, the test subjects remained in good health when they ate enough wheat products to provide them with about 67 grams of protein each day. No ill effects were observed during the 50 days of the study, suggesting that for those underdeveloped countries where wheat is a well-accepted food, emphasis should be placed more on increasing the wheat production and consumption rather than on introducing unfamiliar protein-rich foods.

Although the use of wheat flour and similar plant products may aid in meeting the needs of the world's increasing population, the development of new protein-rich foods is actively under way. Some of these potential foods were described at a symposium at the Massachusetts Institute of Technology in October 1967. One recent development was the discovery that certain one-celled organisms, when grown on a medium of petroleum and petroleum products, produce a protein-rich substance, which after proper processing may be used as a food for man and livestock. Another potential source of protein is plankton, the small aquatic plants and animals that float or drift about in oceans, lakes, and other bodies of water. In one study, plankton harvested off the coast of California was found to be nutritious when fed to experimental animals. According to John Isaacs of the Scripps Institute of Oceanography, the cost of harvesting and processing plankton for food makes this method economically impractical at the present time.

Methods have also been developed for obtaining high-quality protein from species of fish that are not commercially valuable. Some of these fish products are suitable for human consumption, but new techniques of fish culture will have to be developed before these products become economically feasible.

(See also POPULATION.)

MODESTO G. YANG
OLAF MICKELSEN
Michigan State University

OBITUARIES. For a list of prominent persons who died in 1967, see the NECROLOGY on pages 757–768.

O'BRIEN, Lawrence F. See biographical sketch under UNITED STATES.

OCEANOGRAPHY

The major events of 1967 in oceanography include the development of two important new resources from the ocean (natural gas and fish protein concentrate); a marine disaster (the wreck of the *Torrey Canyon*); the beginning of an important cooperative research study in the eastern tropical Pacific; and reports of various curiosities such as huge eddies near the Gulf Stream, rotating water masses in the Arctic Ocean, subsurface ocean flows, and hot-brine areas in the Red Sea.

Gas from the North Sea. The piping of natural gas from beneath the North Sea to the British Isles began early in 1967. The discovery of large, commercially exploitable gas deposits in the North Sea will make a substantial change in the economies of several of the countries bordering its waters.

The rapid exploitation of these undersea areas (the major discovery was made in 1959) was made possible by experience gained in offshore areas of the Gulf of Mexico and the Persian Gulf. Equipment developed for these shallow-water areas was readily adapted to the North Sea, with its 100- to 300-foot (30- to 90-meter) depths. Weather conditions in the North Sea are on the average much worse than those of the other two areas; but the Gulf of Mexico experiences extreme conditions in the hurricane season, and these were taken into account in the design of the platforms. The present estimates of the quantity of natural gas in Britain's area of the North Sea indicate it may supply about 2.5 trillion cubic feet (80 million cubic meters) per day for 30 years.

Fish Protein Concentrate. The U. S. Federal Food and Drug Administration has approved the recently developed "whole fish protein concentrate." This means that many fishes that have not been economical to use as food before can now be processed into a fish flour with at least 75% protein content. This can be incorporated into ordinary flours to add animal protein to foods previously lacking such nutrients.

It has been estimated that if only the presently unused types of fishes in the coastal waters of the United States were made into this concentrate, they could provide enough animal protein to balance the diets of 300,000,000 people at a cost of about five cents per person per day. This could mean a great deal in feeding the world's undernourished people.

Oil-Spill Disaster. Early in 1967 the tanker *Torrey Canyon,* the 13th largest of the ocean tankers, went aground and broke up near the English coast, spilling more than half of her cargo of 118,000 tons of

OCEAN SYSTEMS, INC.

OCEANOGRAPHER Jon Lindbergh, son of aviator Charles Lindbergh, emerges from the conning tower of a small research submarine used in surveys of the ocean floor.

LOCKHEED MISSILES AND SPACE COMPANY

LOCKHEED
DEEP QUEST
10
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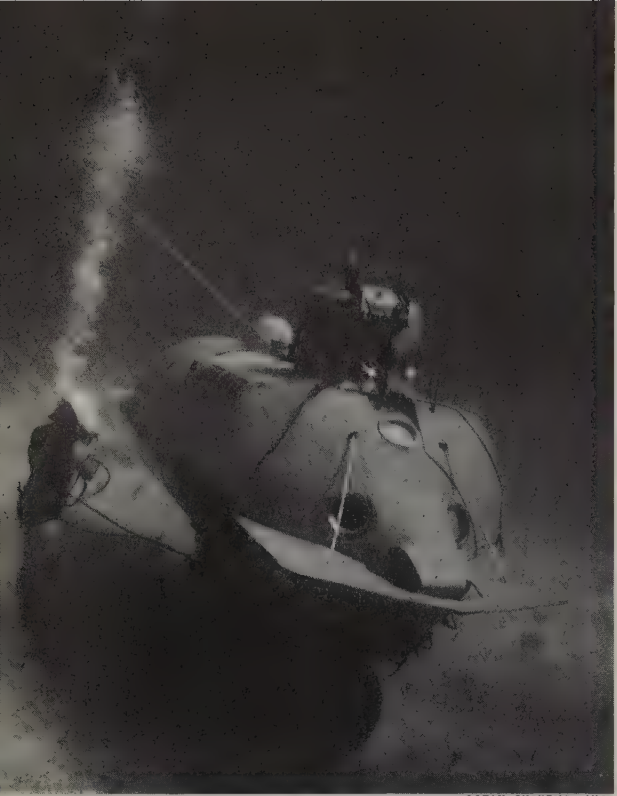
8

DEEP QUEST, one of the largest new research submarines, is lowered into an above-ground tank for systems testing. *Deep Quest* is 40 feet long and can carry a crew of two plus two observers to 8,000-foot depths.



OCEAN SYSTEMS, INC.

DIVERS, at depths down to 1,250 feet, leave and enter the submarine *Deep Diver* via a pressurized compartment.

crude oil into the English Channel. The oil spread out over an immense area of the English Channel and North Sea, causing great damage to the plant and animal life in that area, one of the most heavily fished of the world's oceans. Although many such sinkings occurred during World War II both near Britain and the United States, this was one of the worst such cases on record.

Cooperative Investigations at Sea. The year 1967 saw the beginning of the EASTROPAC (eastern tropical Pacific Ocean) expedition, a cooperative effort toward understanding the oceanography of that region. This area lies roughly between northern Mexico and northern Chile and extends west from the Americas almost to Tahiti (30° N–20° S to 140° W). The region contains the eastern part of the equatorial current system with its equatorial upwelling, the equatorial part of the nutrient-rich Peru Current, and the rich upwelling coasts of South America. It is an area of great interest to all oceanographers but in particular to those concerned with the growth of plants and animals, including the commerically harvested fishes. Scientists and ships from the United States, Mexico, Peru, and Chile have completed the first of several expeditions planned to cover the area seasonally during a period of about two years.

Gulf Stream Eddies. Continuing measurements have shown that the fast-flowing Gulf Stream drops off huge cyclonic eddies on its southeastern side during its meandering course. The eddies are as great as 500 feet (150 meters) in diameter, and the surface rotary flow has speeds as great as 5 feet per second (150 cm/sec). They extend perhaps as far down as 6,500 feet (2,000 meters) beneath the sea surface and may last as long as a year.

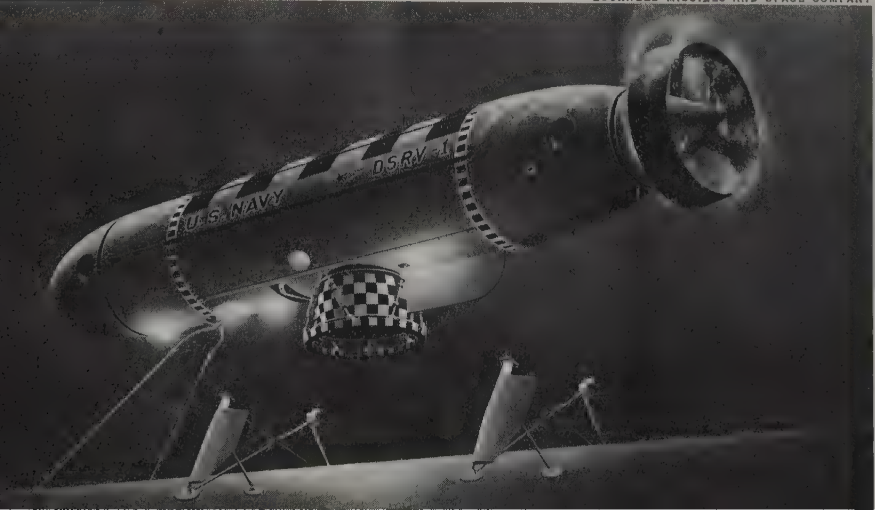
Observations from Ice Island. Long series of current measurements from the floating Fletcher's Ice Island (T-3) in the Arctic Ocean show that the various layers of the upper waters often rotate with a period of about 12 hours (the inertial period for that latitude). This motion is started by the winds and is made rotational by the rotation of the earth.

Equatorial Undercurrents. Oceanographers have reported more measurements in the Atlantic and Pacific oceans of the strong eastward subsurface flows along the equator. They report in both cases a double maximum (at two depths) in the eastward speed of the flow rather than the single jet of high speed that had been usually described. This current has also been reported from the Indian Ocean, where it seems to disappear during the southeast monsoons.

Hot-Brine Areas in the Red Sea. The hot salty water of the Red Sea has been found to appear in the deepest 300 feet (100 meters) of three small basins of about 6,500 feet (2,000 meters) in depth. The largest of these brine pools is about 3 miles (5 km) wide by 7.5 miles (12 km) long. The temperature and salinity of the hot salty water are 133° F 56° C) and 255 parts per thousand, compared with about 72° F (22° C) and about 41 parts per thousand in the other part of the Red Sea. The brine and its heavy metals are believed to be discharged from the eastern side of this basin.

Joseph L. Reid
Scripps Institution of Oceanography

LOCKHEED MISSILES AND SPACE COMPANY



DSRV, or Deep Submergence Rescue Vehicle, is currently being developed to rescue crew members of disabled submarines. DSRV will normally ride on a mother submarine and effect rescues by means of the pod-like hatch on its underside. In this drawing, DSRV is mating to the guide wires on the submarine.

OHIO

James A. Rhodes, first governor of Ohio to be elected to a second four-year term, was inaugurated on Jan. 9, 1967. By executive order, Rhodes created a new Bureau of Urban Affairs, a cabinet-level department that includes the Ohio Office of Opportunity and the Ohio Office of Appalachia. His party (Republican) dominated both houses of the General Assembly. Financial problems, racial violence, and strikes beset Ohio in 1967.

Legislation. The General Assembly set a record for continuous session, meeting from January 2 to August 27, with a brief special session in September to reconsider bills vetoed by the governor. It passed the largest budget in the state's history, giving increased aid to dependent children and pay raises that averaged 15% to nonacademic state employees. Higher education and the school foundation program received greatly augumented appropriations.

To meet these expenditures the Assembly raised the state sales tax from 3% to 4%, and made cigarettes, beer, and industrial towel and linen service subject to the sales tax. A formula was devised by which additional sales taxes could be collected by the counties. The corporation franchise tax was raised, and some industrial tax exemptions were removed. The Assembly also passed measures to control the sale and use of hallucinogenic drugs, and increased penalties for certain highway offenses.

OHIO • Information Highlights

Area: 41,222 square miles (106,765 sq km).
Population: 10,462,000 (July 1, 1967 est.).
Chief Cities (Jan. 1 ,1967 est.): Columbus, the capital, 544,016; Cleveland, 825,436; Cincinnati, 500,496; Toledo, 391,453; Akron, 299,658; Dayton, 267,403; Youngstown, 164,821; Canton, 116,539.
Government: *Chief Officers*—governor, James A. Rhodes (Republican); lt. gov., John W. Brown (R); secy. of state, Ted W. Brown (R); atty. gen., William B. Saxbe (R); treas., John D. Herbert; supt. of pub. instr., Martin W. Essex; chief justice, Kingsley A. Taft. *Legislature*—General Assembly of Ohio (convened Jan. 2, 1967): Senate, 33 members (23 Republicans, 10 Democrats); House of Representatives, 99 members (62 R, 37 D).
Education: *School enrollment* (1965–66)—public elementary, 1,653,200 pupils (48,440 teachers); public secondary, 662,300 pupils (38,087 teachers); nonpublic schools, 442,000 pupils (13,140 teachers); college and university (fall 1965), 278,506 students. *Public school expenditures* (1965–66)—$1,070,000,000 ($503 per pupil); average teacher's salary, $6,350.
Public Finance (fiscal year 1967): *Revenues*, $2,249,450,000 (3% sales tax, $367,283,000; motor fuel tax, $273,952,000; federal funds, $462,034,000). *Expenditures*, $2,318,305,000 (education, $650,996,000; health, welfare, and safety, $425,906,000; highways, $464,437,000). *State debt*, $691,270,000 (June 30, 1967).
Personal Income (1966): $31,670,000,000; average annual income per person, $3,056.
Public Assistance (fiscal year 1967): $193,458,751 to 352,782 recipients (aged, $67,323,894; dependent children, $73,129,389).
Labor Force (employed persons, Aug. 1966): *Agricultural*, 127,300; *nonagricultural* (wage and salary earners), 3,516,000. *Unemployed persons* (Aug. 1966)—123,900.
Manufacturing (1965): Value added by manufacture. $18,352,110,000 (transportation equipment, $2,874,045,000; primary metals, $2,705,210,000; nonelectrical machinery, $2,640,357,000; electrical machinery, $1,743,724,000; fabricated metals, $1,647,926.000; food and products, $1,159,364,000).
Agriculture (1966): *Cash farm income*, $1,383,021,000 (livestock. $730,724,000; crops, $571,095,000; govt. payments, $81,202,000). *Chief crops* (tons)—corn for grain, 7,326,480; hay, 3,555,000; soybeans, 1,679,776; wheat, 1,384,110; sugar beets, 563,000; oats, 523,900; potatoes, 11,090.
Mining (1966): *Production value*, $380,139,000. *Chief minerals* (tons)—bituminous coal, 43,068,447; stone (est.), 42,620,000; sand and gravel, 42,679,669; salt, 5,018,000; clay, 3,003,285; lime (est.), 3,738,000; crude petroleum, 10,889,000 barrels; natural gas, 43,500,000,000 cubic feet.
Fisheries (1965): *Commercial catch*, 11,527,666 pounds ($1,145,000). *Leading species*—sheepshead, 3,988,000 pounds; yellow perch, 2,458,379 pounds; carp, 2,384,468 pounds.
Transportation: *Roads* (1967), 107,218 miles (172,513 km); *motor vehicles* (1966), 5,238,000; *railroads* (1965), 8,176 track miles (13,158 km); airports (1965), 397.
Communications (1966): *Telephones* (1967), 5,255,200; *television stations*, 27; *radio stations* (AM), 126; *newspapers*, 96.

UPI

OHIO COLLEGE STUDENTS protesting the Vietnam War sat in at Selective Service offices in Cincinnati, December 7. One youth is forced to climb over the students to register.

Constitutional Amendments. Two administration-sponsored amendments to the state constitution were approved by the legislature but defeated by the voters in the May primary election.

The first proposed amendment, designed to circumvent the $750,000 limit on the state's bonded indebtedness (a provison of Ohio's 1851 constitution), would have given the General Assembly authority to approve projects beyond the debt limit. The amendment provided for the establishment of a bipartisan, five-member Ohio Bond Commission, which would have had power to expend money for land and construction of facilities for various public purposes—each project to be approved first by the General Assembly. The amendement would have ended the need for the voters to approve (as a constitutional amendment) any project requiring expenditures beyond the debt limit. The voters soundly defeated the proposal.

The vigorous opposition to the Bond Commission amendment probably contributed to the defeat of the second proposed amendment, designe to implement the reapportionment of the General Assembly. A similar, but more restrictive, reapportionment amendment was passed by the voters in November.

Racial Violence. The spring and summer of 1967 brought racial violence to cities in Ohio. Disorders occurred in Massillon, Youngstown, Springfield, Hamilton, and Cleveland. In Cincinnati, Toledo, Dayton, and Lorain, serious violence led to the calling of the National Guard. In Cincinnati, rioting broke out in the Avondale section, a predominantly Negro neighborhood, on June 13, and spread to nearby Walnut Hills and Evanston on the following nights. Prisoners in the city workhouse battled National Guardsmen, local police, and prison officials on the night of June 15, the final day of the riot. In Toledo the final week in July was marked by violence, looting, and burning.

At Central State University, a predominantly Negro school in Wilberforce, student demonstrations and disorders caused the trustees to close the school from November 14 to 27. The violence, touched off by the arrest of a suspended student, culminated in the resignation (later withdrawn) of the president, Dr. Harry E. Groves.

In May a federal district court barred job discrimination on state works projects. Several important construction projects were suspended because labor unions failed to supply qualified Negro workers.

Cleveland Mayoralty Election. In November, Carl B. Stokes became the first popularly elected Negro mayor of the major U. S. city. Stokes, a Democrat, narrowly defeated Seth Taft, grandson of William Howard Taft. (See also CLEVELAND.)

Strikes. Policemen and firemen in Youngstown won higher wages through a much-publicized strike in September. The Toledo *Blade* and the Toledo *Times* were forced to suspend publication during a 148-day strike by the Newspaper Guild and related unions.

FRANCIS P. WEISENBURGER
The Ohio State University

OIL. See PETROLEUM.

OKLAHOMA

OKLAHOMA • Information Highlights

Area: 69,919 square miles (181,090 sq km).

Population: 2,496,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Oklahoma City, the capital, 380,000; Tulsa, 280,000; Lawton, 70,500; Midwest City, 46,000; Norman, 46,000; Enid, 40,000; Muskogee, 38,000; Bartlesville, 30,000.

Government: *Chief Officers*—governor, Dewey F. Bartlett (Republican); lt. gov., George Nigh (Democrat); secy. of state, John Rogers (D); atty. gen., G. T. Blankenship (R); treas., Leo Winters; supt. of pub. instr., Oliver Hodge; chief justice, Floyd L. Jackson. *Legislature*—(convened Jan. 3, 1967)—Senate, 48 members (9 Republicans, 39 Democrats); House of Representatives, 99 members (25 R, 74 D).

Education: *School enrollment* (1965–66)—public elementary, 362,900 pupils (12,740 teachers); public secondary, 255,000 pupils (10,400 teachers); nonpublic, 22,700 pupils (980 teachers); college and university (fall 1965), 89,326 students. *Public school expenditures* (1965–66)—$227,000,000 ($411 per pupil); average teacher's salary, $5,650.

Public Finance (fiscal year 1967): *Revenues,* $821,358,453 (3% sales tax, $72,184,327; motor fuel tax, $38,744,943; federal funds, $281,791,742). *Expenditures,* $807,944,696 (education, $296,453,796; health, welfare, and safety, $257,560,260; highways, $175,473,629). *State debt,* $107,025,000 (Sept. 22, 1967).

Personal Income (1966): $6,099,000,000; average annual income per person, $2,462.

Public Assistance (fiscal year 1967): $133,374,321 to 197,575 recipients (aged, $74,990,127; dependent children, $35,608,245).

Labor Force (employed persons, annual average 1966): *Agricultural,* 116,800; *nonagricultural* (wage and salary earners), 681,500 (16.6% manufacturing, 22.4% trade, 24.4% government). *Unemployed persons* (annual average 1966)—34,500.

Manufacturing (1965): Value added by manufacture, $1,096,262,000 (transportation equipment, $113,833,000; primary metals, $46,413,000; nonelectrical machinery, $139,155,000; electrical machinery, $87,710,000; fabricated metals, $112,121,000; food and products, $156,998,000; petroleum and coal products, $113,276,000).

Agriculture (1966): *Cash farm income,* $959,907,000 (livestock, $562,358,000; crops, $290,269,000; govt. payments, $107,280,000). *Chief crops* (tons)—wheat, 2,961,000 (ranks 4th among the states); hay, 2,595,000; sorghum, 567,840; barley, 243,264; cottonseed, 92,000; soybeans, 80,080; oats, 79,872.

Mining (1966): *Production value,* $979,737,000. *Chief minerals* (tons)—stone, 17,178,000; sand and gravel, 5,400,000; bituminous coal, 850,000; gypsum, 816,000; clays, 754,000; crude petroleum, 224,000,000 barrels.

Transportation: *Roads* (1967), 106,769 miles (171,791 km); *motor vehicles registered* (1966), 1,596,087; railroads (1967), 5,611 track miles (9,028 km); *airports with scheduled services* (1967), 11.

Communications (1967): *Telephones,* 1,185,100; *television stations,* 14; *radio stations,* 83; *newspapers,* 54.

In 1967, the first year that it was empowered to meet annually, the Democratic-controlled Oklahoma legislature held a short, harmonious session under Gov. Dewey F. Bartlett, a Republican elected in 1966. Governor Bartlett was able to keep his campaign promise that there would be no additional taxes, although certain license fees were increased.

Legislation. The chief accomplishments of the legislative session were measures to promote highway safety and to effect court reform. Highway safety measures included a $1 charge on state automobile licenses to finance high school driver education, mandatory annual inspection of all highway vehicles beginning Jan. 1, 1969, and mandatory intoxication tests for motorists suspected of drunken driving. A department of corrections was created and given jurisdiction over the penal system, probation and parole, and jail inspection. An indeterminate-sentence law removed from juries the power to set penalties in criminal cases. Measures providing for court reorganization, including abolition of the justice of the peace system, were approved by the voters in a special election in July.

The legislature also redrew the boundaries of Oklahoma's six congressional districts and moved primary election dates from May to the fourth Tuesday in August, with runoff elections on the third Tuesday in September. Another piece of legislation authorized state-operated birth control centers. Another, which attracted national attention, gave legality to artificial insemination of human beings and set forth the rights of children thus conceived.

University Unrest. Minor campus unrest occurred at Oklahoma State University of Agriculture and Applied Science (Stillwater) in May, when the scheduled appearance of speakers on controversial subjects was canceled. Similar disorders occurred later when the university's board of regents announced a restrictive policy on subject matter that can be presented under university sponsorship to faculty-student groups.

Statehood Anniversary. Oklahoma's 60th anniversary (Nov. 16, 1967) was observed statewide. Four internationally known ballerinas of Indian descent—Yvonne Chouteau, Rosella Hightower, Moussia Larkina (Moscelyne Larkin), and Marjorie Tallchief—appeared in Tulsa and Oklahoma City in an original ballet, *The Four Moons,* with music by Louis Ballard, who also is of Indian descent.

Model City. Tulsa was one of the 63 communities selected for the federal government's model cities program. An area on the north side of the central business district will be redeveloped.

New Industrial Site. Development began near Catoosa in February on an industrial park with 7 miles of river frontage. The new site adjoins port facilities under construction along the Verdigris River. The park is at the head of navigable waters for the Arkansas River Project.

Sports. The University of Oklahoma football team was selected to meet the University of Tennessee in the Orange Bowl game at Miami, Fla., on Jan. 1, 1968. Oklahoma won by a score of 26–24.

J. STANLEY CLARK
Oklahoma City University

OLD AGE

Despite the greater diversion of national effort and wealth to defense and the Vietnam War, the United States made progress in 1967 in improving the circumstances, opportunities, and environment for older people. Important advances were recorded in income, new employment for the retired, housing, medical care, and professional training.

Older Population Growth. In the year in which the total population of the country reached 200 million, the number of Americans 65 years of age and over reached 19 million, and the number of those 85 and over exceeded 1 million. Of those 65 and over, approximately 8 million are men and about 11 million are women, more than one half of whom are widows. More than 80% of these older people live in 11 million households maintained by themselves; about 15% live in the households of others; and fewer than 5% are in institutions.

Improvements in Income. Poverty and meager income still constitute the most pervasive restrictions on satisfying retirement life. The median annual income of older couples was about $3,700 in 1967; that of older nonrelated individuals, just under $1,500. Consequently, the most significant event of the year for older people was enactment of social security legislation that increased benefits for all beneficiaries by 13% and raised the minimum benefit from $44 to $55 per month, beginning with February 1968. Average benefits to couples were increased from $145 to $165. The increases will be financed by raising the social security tax rate and the wage base on which taxes are computed. (See also SOCIAL SECURITY.)

New Employment for the Retired. The year brought further efforts to increase retirement incomes through the provision of new social employment opportunities for the retired. The Administration on Aging, the Department of Labor, the Office of Economic Opportunity, and the Small Business Administration—working through scores of communities and organizations—moved forward with programs to engage older people in voluntary community service activities, often on a paid basis.

More than 4,000 low-income older persons are working with 8,000 institutionalized children in the foster grandparents program; 2,000 older people are working in Job Corps and Head Start programs; 7,000 are serving in neighborhood health and legal centers. Hundreds of others are working as library and teacher aides, hospital volunteers, companions and visitors to homebound and institutionalized aged persons, program leaders in senior activity centers, and staff members of over 60 employment services. By June 1967, SCORE (Service Corps of Retired Executives) reported that 3,100 volunteers had provided counseling for 30,000 small business operations. (See also ANTI-POVERTY PROGRAM.)

Housing and Retirement Facilities. The range and supply of retirement housing for low-income older people was increased through implementation of several new programs administered by the Department of Housing and Urban Development in cooperation with local housing authorities and private organizations. Under the rent supplement program, the difference between 25% of the older householder's income and the established rent is paid by the government. The rate at which additional dwellings are being provided was accelerated through the purchase and rehabilitation of existing housing for rental to older people and through the immediate purchase of new housing constructed by private enterprise under the limited dividend turnkey program.

At year end, some 225,000 older people were living in housing provided by federally assisted local housing agencies. The model cities program that became operational in November affords opportunity for including housing and other facilities for the aged in planned neighborhood developments.

Medical Care. By July 1, 1967, the end of its first year of operation, the social security health insurance program had recorded almost 5 million hospital admissions and handled more than 10 million bills for medical services. A good deal of attention focused during the year on rising costs of services, on deductible charges, and on the noncoverage of the costs of dental care, prescribed drugs used outside of the hospital, and eyeglasses, dentures, and other prostheses. A survey revealed that 51% of persons 65 years of age and over carry private insurance, mainly to supplement Medicare payments for hospital care, surgery, and in-hospital visits by physicians. Relatively few, however, have coverage for protracted institutional care or health checkups.

In an effort to hold costs down and to enable older people to remain in their own surroundings, there was a continued drive to provide health services in the home. By the fall of 1967 there were 1,850 approved home health agencies providing services to 228,000 health insurance beneficiaries. Included among the services were physical, occupational, and speech therapy; housekeeping and elemental care; nutritional guidance; appliances and equipment; and medical social service.

Professional Training and Research. The rapid development of state and community planning for older people and of hundreds of new community programs has created a compelling need for professional and paraprofessional personnel with specialized knowledge and skills in serving older people. Personnel are needed for teaching and research in universities and professional schools, for planning and administration of programs and facilities, and for providing a wide range of direct services.

By the end of 1967 at least 35 major universities and professional schools were offering graduate-level teaching programs in such areas as research and teaching in the biological, behavioral, and social aspects of gerontology; public administration and community organization in aging; retirement housing management and institutional administration; and specialized work in aging within the fields of architecture, nursing, psychiatry, public health, recreation, and social work. Most of these programs offer federally supported traineeships to students. Three universities—Duke, the University of Michigan-Wayne State University, and Southern California—have become major centers for comprehensive research and training programs in gerontology.

When Congress amended the Older Americans Act in 1967 to extend its provisions through 1972, it directed the secretary of Health, Education, and Welfare to make an inventory of training needs and facilities for personnel for the field of aging.

CLARK TIBBITTS
Administration on Aging
U. S. Department of Health, Education, and Welfare

OMAN. See MUSCAT AND OMAN.

ONGANÍA, Juan Carlos. See biographical sketch under ARGENTINA.

ONTARIO

Elections for an enlarged provincial parliament—expanded from 108 to 117 members—were held in Ontario in 1967. As a result of the elections, the Progressive Conservative party continued to rule, but with a smaller majority. Economic conditions in Ontario remained good.

Political Affairs. In the early months of the year there were many indications that the provincial government was preparing for a spring vote. A cabinet reshuffle, a budget involving no new taxes, a new home loans program, relaxed liquor laws, and generally favorable economic conditions all pointed in that direction. The elections, however, were not held until October 17. This change in plans was probably brought about by a combination of factors, including a heated campaign for the national leadership of the Progressive Conservative party, and public reaction against the firing of the very popular Toronto coroner, Dr. Morton Shulman (who later was elected on the New Democratic ticket). Constituencies were redistributed before the elections.

After an unusually low-keyed campaign, the government party was reelected, with a decreased representation from 78 to 69 seats in the Legislative Assembly. The Liberals went from 22 to 28 seats as a result of the election, and the New Democratic party, while failing in its bid to replace the Liberals as the official opposition, moved from 8 to 20 seats. Of the 2.4 million votes cast, 42% went to the Progressive Conservatives, 32% to the Liberals, and 26% to the New Democrats. The Liberal campaign was headed by a new leader, Robert Nixon, elected in November 1966.

Economic and Social Affairs. One factor contributing strongly to the reelection of the Progressive Conservative government was Ontario's continued economic growth. While Ontario's contribution to the gross national product was down to an estimated 7%—from 9% in 1966—this included a 4% growth in real terms. Revenue increased from an estimated $1,780,000,000 for fiscal 1967 to an estimated $2,030,000,000 for fiscal 1968. Accompanying this increase was a new 2-year federal-provincial tax agreement, which brought Ontario an estimated 4% increase in its share of personal income tax (up to 28%) and a 1% increase in its taxable corporation income (up to 12%).

ONTARIO • Information Highlights

Area: 412,582 square miles (1,068,589 sq km).

Population: 6,960,870 (1966 census).

Chief Cities (1966 census): Toronto, the provincial capital, 664,584; Hamilton, 298,121; Ottawa, the federal capital, 290,741; London, 194,416; Windsor, 192,544.

Government: *Chief Officers*—lt. gov., W. Earl Rowe; premier, John P. Robarts (Progressive Conservative); prov. secy., Robert S. Welch (PC); atty. gen., Arthur A. Wishart (PC); prov. treas., Charles S. MacNaughton (PC); min. of educa., William G. Davis (PC); chief justice, Dana H. Porter. *Legislature*—Legislative Assembly (convened February 1968); 117 members (69 Progressive Conservative; 28 Liberal; 20 New Democratic Party).

Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 1,673,774 pupils (62,291 teachers); private schools, 44,470 pupils (2,817 teachers); Indian (federal) schools, 7,266 pupils (271 teachers); college and university (fall 1966), 68,589 students. *Public school expenditures* (1963)—$697,707,000 ($496 per pupil); average teacher's salary (1964–65 est.), $6,306.

Public Finance (fiscal year 1967 est.): *Revenues,* $1,978,380,000 (chiefly, sales tax, $709,460,000; income tax, $633,882,000; federal funds, $22,613,000). *Expenditures,* $2,074,070,000 (chiefly, education, $684,090,000; health and social welfare, $574,030,000; transport and communications, $374,950,000).

Personal Income (1966 est.): $16,921,000,00; average annual income per person, $2,454.

Public Assistance (fiscal year 1967 est.): $85,840,000 (aged and blind, $23,140,000; dependents and unemployed, $47,130,000).

Labor Force (industrial employees only, 1966 est.): 1,875,900.

Manufacturing (1964): Value added by manufacture, $7,066,985,000 (transportation equipment, $920,077,000; primary metals, $686,141,000; chemical and chemical products industries, $555,101,000).

Agriculture (1966 est.): *Cash farm income,* $1,241,915,000 (livestock, $865,632,000; crops, $334,852,000; govt. payments, $34,326,000). *Chief crops* (cash receipts)—tobacco, $113,703,000 (ranks 1st among the provinces); vegetables, $48,117,000 (ranks 1st); corn, $31,054,000 (ranks 1st); fruits, $30,551,000 (ranks 1st); potatoes, $23,161,000 (ranks 1st); wheat, $20,110,000 (ranks 4th); soybeans, $19,813,000 (ranks 1st).

Mining (1966 est.): *Production value,* $964,534,072. *Chief minerals* (short tons)—nickel, 169,878 (ranks 1st among the provinces by value); copper, 209,377 (ranks 1st); iron ore, 8,253,377 (ranks 3d); sand and gravel, 81,224,635 (ranks 1st); cement, 3,184,372 (ranks 1st); gold, 1,648,481 troy ounces (ranks 1st).

Transportation: *Roads* (1965), 98,664 miles (158,750 km); *motor vehicles* (1965), 2,516,680; *railroads* (1966), 9,965 track miles (16,034 km); *licensed airports* (1966), 82.

Communications: *Telephones* (1965), 2,924,531; *television stations* (1967), 19; *radio stations* (1966), 76; *newspapers* (1966), 45 (daily circulation, 1,834,411).

The new tax agreement enabled the provincial government to hold taxes at current levels, and to increase expenditures to an estimated $1,831,800,000 for fiscal 1967 and $2,193,300,000 for fiscal 1968. The government proposed to delegate a large percentage of its 1968 spendings—$1,063,000,000—to "human development," which would comprise many educational and vocational training programs.

WIDE WORLD

QUEEN ELIZABETH reviews a regiment of Cameron Highlanders at Ottawa, Ontario, on July 6, at the end of her Canadian visit.

The government was also helped in its election campaign by the publication of the report of the Ontario Committee on Taxation. The Smith Report (so named for the committee chairman, Lancelot J. Smith) contained two promptly promulgated proposals: a property exemption on the first $2,000 of property assessed, and the assumption by the province of all costs pertaining to the administration of justice within Ontario. The report made a controversial proposal for the taxing of churches (at half rates) and also predicted increased taxes, including a 12% rise in income taxes.

The outstanding feature of the Smith Report, however, was its daring outline of a new system of regional government. According to the plan, regional government within the province would be divided into 29 metropolitan, urban, and county sectors, which would take over responsibility for such duties as property assessment, tax collection, and the financing of municipal works.

Other government programs and proposals made news in 1967. The government opened a special new commuter train service to Toronto, and announced plans for its expansion. A great number of citizens took advantage, throughout the year, of a legal aid scheme inaugurated by the Ontario government in 1966. And a government legislative committee, in the light of recent financial scandals, advocated a new "bill of rights" for shareholders and a strict, enforceable code of ethics for company directors and trustees. However, strong opposition from the business community postponed any revision in the Ontario Corporations Act, and the government promised to introduce business reforms at a later date.

After five years of controversy, Justice Landreville of the Ontario Supreme Court resigned, just as the federal Senate was scheduled to debate his compulsory resignation from the bench.

Centennial. Throughout 1967, Ontario participated in the general Canadian centennial debate on the future of Canada and the need for revisions in the Canadian federal system. Ontario Premier John P. Roberts called a "Confederation of Tomorrow" conference on November 27–29 in Toronto, to which representatives of all the provincial governments and the federal government were invited. The conference reviewed the shortcomings of the federal system, its broad objectives, the machinery of federal-provincial and interprovincial relations, and the role of bilingualism in Canada.

B. B. KYMLICKA

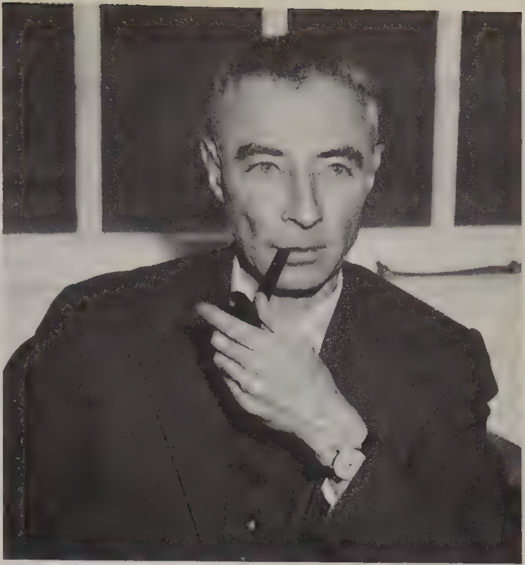
Talbot College, University of Western Ontario

OPPENHEIMER, J. Robert

U. S. physicist: b. New York, N. Y., Apr. 22, 1904; d. Princeton, N. J., Feb. 18, 1967.

Julius Robert Oppenheimer made major contributions both in theoretical physics and in the education of physicists and nonphysicists. His eloquent popular lectures, published under the titles *Science and The Common Understanding* (1954), *The Open Mind* (1955), and *The Flying Trapeze: Three Crises for Physicists* (1964), give a sense of the dignity and joy of science and of its relevance to philosophy and ethics.

Oppenheimer's career may be divided into three parts: a pre-World War II period as a pure scientist; a wartime post as the director of the Los Alamos Laboratory, where the first atomic bomb was developed; and a postwar career. During the last period he divided his time between heading the Institute for Advanced Study in Princeton (of which he had become director in 1947) and, until he lost his security clearance in 1954, acting as governmental adviser.



UPI

J. ROBERT OPPENHEIMER, who died on Feb. 18, 1967, shown when he headed the Institute for Advanced Study.

Scientific Contributions. Oppenheimer's scientific career began as a student at Harvard, which he entered in 1925 and from which he graduated three years later. In 1927, Oppenheimer took his doctor's degree in Germany, at Göttingen, under the direction of the German theoretical physicist Max Born.

In 1930, Oppenheimer made one of his most significant scientific contributions by clarifying the concept of "antiparticle." He proved that particles and antiparticles must have the same mass; and soon after, an antielectron (the positron), with the same mass as the electron, was discovered. By this time Oppenheimer had returned to the United States and, as a professor of physics at Berkeley and the California Institute of Technology, he founded the first major U. S. school of theoretical physics.

Government Service. Oppenheimer was the natural choice to direct the atomic bomb project at Los Alamos, N. Mex., and he became its director in 1943. For many physicists, including Oppenheimer, World War II meant a sudden political coming of age. Before the war Oppenheimer did not have much interest in politics, and such interest as he had was aroused by the economic effect of the depression of the 1930's on his students. While he never became involved in any organized movements, many of his friends and colleagues of this period belonged to the sort of liberal, "left-wing" groups that were popular in the 1930's, and some joined the Communist party itself.

Oppenheimer was chairman of the General Advisory Committee to the Atomic Energy Commission (AEC) from 1937 to 1953. He participated in a number of controversial decisions, especially with respect to the hydrogen bomb, which he felt, for both technical and humanitarian reasons, should not have been built.

Princeton. After the war Oppenheimer went to the Institute for Advanced Study as its director. His remarkable qualities as a teacher were in evidence there, too. Young physicists from all over the world flocked to Princeton to spend a year or two at the institute, and found an atmosphere that reflected Oppenheimer's broad interest in culture, personal elegance, and a high tolerance for the unconventional.

Security Case. In 1953 allegations that Oppenheimer's associations made him a security risk were submitted to President Eisenhower. After Eisenhower ordered that he be denied further official information, Oppenheimer requested a hearing. A three-man board appointed by the AEC decided that, although Oppenheimer was loyal, he was a security risk. This decision was upheld by the AEC commissioners, and on June 30, 1954, his contract as a consultant to the AEC was terminated.

Since Oppenheimer's associations were well known to the military authorities who had appointed him director at Los Alamos, much of the bitterness that surrounded the "Oppenheimer case" was a result of the feeling on the part of the scientific community that he was being branded a "security risk" in 1954 for exactly the same associations that had been acceptable to the government in 1943, when Oppenheimer's services had been used in the construction of the atomic bomb.

In 1963 the AEC presented the Enrico Fermi Award (a gold medal and $50,000) to Oppenheimer in recognition of his contributions. This was widely interpreted as a gesture to clear his name.

There is little doubt that the last part of Oppenheimer's life contained an element of tragedy. Although he was known as "the father of the bomb," a sobriquet that he detested, his abiding interest was in the peaceful applications of nuclear energy. And just at the time when he might have contributed to this development, he was shut off from the government by the loss of his security clearance.

Influence. In summarizing Oppenheimer's life and work, one may conclude that his legacy is probably reflected most brilliantly in the institutions that he founded and the students that he produced. He brought theoretical physics to the United States and founded the first great school of theoretical physics there. He built and developed, for better or worse, the first laboratory, Los Alamos, devoted to the military use of nuclear energy, and at Princeton he left a flourishing scientific and intellectual establishment. No American physicist has been uninfluenced by Oppenheimer's work, and most American theoretical physicists can trace their genealogy, through their teachers, back to Oppenheimer and his school.

JEREMY BERNSTEIN
Stevens Institute of Technology

OREGON

In Oregon, 1967 was the year of the longest legislative sessions in state history. It was also the year of the long, dry summer when fires swept through the forests, filling the skies with a pall of smoke during most of the season.

Forest Fires. Three months with only a trace of rain made tinderboxes of the woods, and 3,455 forest and range fires caused damage totaling $15 million. Oregon's important lumber market already was depressed by tight money and a slow-up in the building industry, and logging and lumbering virtually stopped until saving rains came in October.

OREGON • Information Highlights

Area: 96,981 square miles (251,181 sq km).

Population: 1,999,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Salem, the capital, 63,500; Portland, 380,000; Eugene, 70,000; Corvallis, 28,500; Medford, 27,400; Springfield, 23,500; Parkrose, 23,000.

Government: *Chief Officers*—governor, Tom McCall (Republican); secy. of state, Clay Myers (R); atty. gen., Robert Y. Thornton (Democrat); treas., Robert W. Straub; supt. of pub. instr., Leon P. Minear; chief justice, William C. Perry. *Legislature*—Legislative Assembly (convened Jan. 9, 1967): Senate, 30 members (11 Republicans, 19 Democrats); House of Representatives, 60 members (39 R, 21 D).

Education: *School enrollment* (1965–66)—public elementary, 286,986 pupils (11,140 teachers); public secondary, 177,387 pupils (8,250 teachers); nonpublic, 38,400 pupils (1,480 teachers); college and university, 71,601 students. *Public school expenditures* (1965–66)—$252,500,000 ($612 per pupil); average teacher's salary, $6,650.

Public Finance (fiscal year 1967): *Revenues,* $1,023,592,500 (state tax sources, $322,164,711; motor fuel tax, $64,617,938; federal funds, $134,074,014). *Expenditures,* $1,058,434,175 (highways, $165,365,222). *State debt,* $482,459,000 (July 1, 1967).

Personal Income (1966): $5,738,000,000; average annual income per person, $2,908.

Public Assistance (fiscal year 1967): $49,994,867 to 64,000 recipients (aged, $12,711,694; dependent children, $19,579,596).

Labor Force (employed persons, annual average, 1966): *Agricultural,* 60,600; *nonagricultural* (wage and salary earners), 636,900 (26.1% manufacturing, 22.5% trade, 19.6% government). *Unemployed persons* (annual average, 1966)—35,900.

Manufacturing (1965): Value added by manufacture, $1,833,324,000 (transportation equipment, $80,782,000; lumber and wood products, $761,015,000; nonelectrical machinery, $90,105,000; electrical machinery, $73,498,000; fabricated metals, $61,740,000; food and products, $263,524,000).

Agriculture (1966): *Cash farm income,* $537,918,000 (livestock, $231,753,000; crops, $281,817,000; govt. payments, $24,348,000). *Chief crops* (tons)—pears, 164,000 (ranks 2d among the states); hay, 2,158,000; wheat, 795,300; potatoes, 519,250; sugar beets, 428,000; barley, 427,392; oats, 82,800.

Mining (1966): *Production value,* $80,567,000. *Chief minerals* (tons)—stone, 21,000,000; sand and gravel, 20,000,000; pumice, 660,000; clays, 313,000; lime, 114,000; nickel, 14,771.

Fisheries (1966): *Commercial catch,* 74,452,508 pounds (1965, $9,341,346). *Leading species*—bottomfish, 26,855,261 pounds; tuna, 18,040,614 pounds; salmon, 12,722,905 pounds; crabs, 10,544,126 pounds.

Transportation: *Roads* (1965), 83,592 miles (134,525 km); *motor vehicles* (1965), 1,228,156; *railroads* (1966), 5,073 track miles (8,164 km); *airports with scheduled service* (1967), 13.

Communications (1966): *Telephones* (1967), 960,100; *television stations,* 14; *radio stations,* 105; *newspapers,* 22.

Legislation. The legislature met for two sessions—the regular biennial session, which lasted for 157 days (a record), and a "Halloween Special," which began on October 30 and lasted for 30 days (another record). Threatened by tax revolts, the Republican-dominated House of Representatives sought property tax relief by proposing a sales tax, something new for Oregon. The Senate turned it down.

When Gov. Tom McCall summoned the special session, he too asked for a sales tax, something he had not advocated before. Schools were facing desperate budget cuts. State colleges and universities encountered increased student bodies and budget cuts at the same time. Again, the lower house voted for a sales tax to be referred to the people, and again the Senate turned it down. When the special session adjourned, Governor McCall went to the people on radio and television, saying, "All we got was a dog biscuit."

There were some positive legislative results, however. A bill was passed to protect Oregon's beaches from encroachment by commercial developments. A strong bill giving new power to the state to control air and water pollution already has brought results. Governor McCall pushed for and got a Willamette River Greenway.

Research and Development. Oceanography continued to develop with pioneering efforts in this field by Oregon State University at Corvallis and the ex-

DOWNTOWN OTTAWA is undergoing urban renewal as new buildings (*left foreground*) are erected for a new complex, to be called Place de Ville. Parliament buildings, erected in 1865, are in background, on the river bank.

ANNAN PHOTOS

pansion of the university's Marine Science Center at Newport. One of the most dramatic developments over the last few years, reaching a new high in 1967, has been in the production of atomic-age metals such as titanium, zirconium, vanadium, yttrium, and hafnium at Albany. There, clustered around the U. S. Bureau of Mines center, is a group of companies with a 1,500-man, $12-million payroll, carrying on research and production. Studies of LSD users by researchers at the Oregon Regional Primate Research Center at Beaverton revealed that such users showed a high rate of damaged chromosomes in their white blood cells. (See also HALLUCINOGENIC DRUGS.)

The Economy. Although lumbering was at a low point, the year was one of general prosperity. The gross state product reached a new high of $7.8 billion, and personal income soared. Income from tourism, a major industry in Oregon, exceeded that of 1966 by 9%. Bank debits, cash farm income, production of manufactured goods, and spending all were up from the previous year.

KENNETH L. HOMES
Oregon College of Education

ORGANIZATIONS, American. See SOCIETIES AND ORGANIZATIONS.
ORIENTAL RELIGIONS. See RELIGION.
ORTHODOX CHURCHES. See RELIGION.

OTTAWA

Canada's national capital and fifth-largest city (1967 est. pop.: city, 294,377; metropolitan area, 508,000) Ottawa in 1967 was the focus of ceremonies marking the 100th anniversary of the confederation of Canada. It was visited by Queen Elizabeth II, who addressed members of Parliament in a memorable outdoor meeting on Parliament Hill on July 1, and by more than 60 heads of state or their representatives. The Centennial Flame on Parliament Hill was lighted on New Year's Eve.

Construction. Ottawa's centennial project, the Lansdowne Park Civic Centre, was opened in two stages in 1967. The stadium, holding 20,000 persons, opened in June and the arena opened in November. The Lansdowne Park Stadium was the site of the annual Grey Cup game, Canada's national football championship, on December 2.

The city's 450-room Skyline Hotel was completed in 1967. The 26-story hotel, the tallest commercial building in Ottawa, is part of a hotel-office building complex known as the Place de Ville. Built in a downtown area scheduled for urban renewal, the three-towered complex was built over an underground parking garage and a completely enclosed shopping mall. The entire project, covering a city block, was constructed over a 16-month period.

A permanent pedestrian mall, opened in June, extends along three blocks of Sparks Street, one of the principal thoroughfares of downtown Ottawa. First opened on a temporary basis in the summer of 1960, the mall proved so popular that city administrators decided to construct a permanent shopping center with gardens, fountains, and exhibition areas. The mall, which cost $636,000, is believed to be the largest of its kind in Canada.

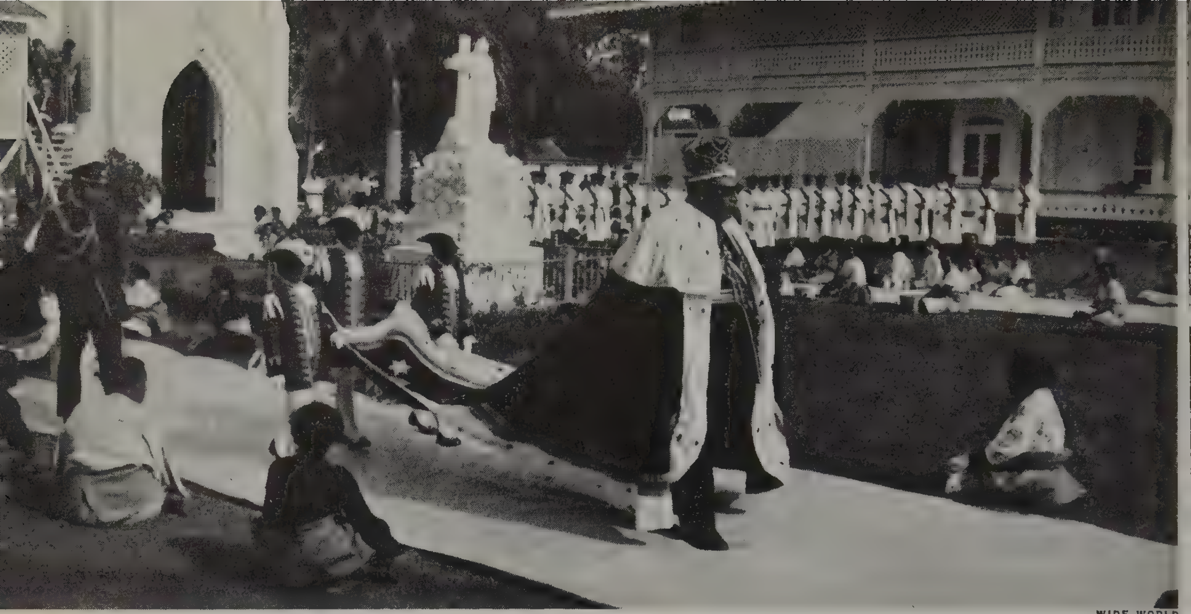
Politics. Charlotte Whitton, Ottawa's controversial ex-mayor and now a member of the City Council, was deprived of her seat on the council by court order in November because of legal action she had taken against the city. Miss Whitton had sought to have the Supreme Court of Ontario declare invalid a 10-year lease between the city and the management of Lansdowne Park.

Government and Finance. Ottawa's city government consists of a Board of Control, with administrative functions, and the City Council, to which the board is responsible. The board is composed of a mayor (Donald B. Reid, elected in December 1966 for a 3-year term) and four elected controllers. The Council consists of two aldermen from each of the city's 10 wards.

The city budget for 1967, including expenditures by school and hospital boards, totaled $109,973,586, a 17% increase over 1966. It was the first budget to exceed $100 million in the history of the city. City revenues, including grants from the provincial and federal governments, are expected to cover $63,458,000 of the total. The remainder will be raised by taxation.

Education. Public primary schools in Ottawa in 1967 enrolled 26,551; Roman Catholic primary schools, 26,847 (13,257 in the English-speaking section and 13,590 in the French-speaking); and collegiate high schools, 23,200. Carleton University had 5,086 students and the University of Ottawa had 4,850 students.

DAVID M. L. FARR
Carleton University



WIDE WORLD

THE CORONATION of King Taufa'ahau Tupou IV of Tonga at a Methodist Church, July 4, climaxes week-long ceremonies honoring his succession to the throne.

PACIFIC ISLANDS

The 7th South Pacific Conference was held in Noumea, New Caledonia, on Oct. 2–7, 1967. Delegates from 18 island territories discussed economic, social, and health programs for 1968 and considered a proposal for a South Pacific Arts Festival. A longer South Pacific Conference, planned for 1968, will be held in Guam.

Sir Gawain Westray Bell of Britain became secretary-general of the South Pacific Commission in January 1967, succeeding W. D. Forsyth of Australia.

At the "Heart of Polynesia" conference in Apia, Western Samoa, on May 29–31, 200 representatives from islands in the central Pacific Ocean examined proposals for expanding the tourist industry. Major topics under discussion included hotel construction, new airline services, and cooperation in promoting package tours. Western Samoa, American Samoa, and Tonga sponsored the conference.

French Polynesia. After completing a series of low-yield nuclear tests over Mururoa atoll in June, the French government announced plans to test an H-bomb in the 500-kiloton range at Mururoa in July 1968.

The ferry *Rotui,* which had carried thousands of passengers between Tahiti and Moorea, ran onto a reef off Moorea on July 20. Fortunately, no lives were lost in the accident. Following several unsuccessful attempts to refloat the vessel, it was set afire to prevent its becoming a hazard to navigation.

American Samoa. Owen S. Aspinall, territorial secretary and frequently acting governor since 1962, was appointed 45th governor of American Samoa on August 1. He pledged to increase economic self-sufficiency and to further social development. Aspinall succeeded H. Rex Lee, whose 6-year term was the longest in the history of U. S. administration in the islands. During Lee's tenure, educational television was introduced, harbor facilities were completed, and new roads and public buildings were built. On May 27, Governor Lee signed a bill removing import duties on all goods as a means to attract tourists to the islands. At the same time, excise taxes were levied on alcohol, tobacco, motor vehicles, firearms, and certain other items.

Tonga. A coronation ceremony at Nukualofa, Tonga, on July 4 marked the official succession to the throne of King Taufa'ahau Tupou IV, whose mother, Queen Salote Tupou III, died in 1965. The Duke and Duchess of Kent represented Queen Elizabeth II of Britain at the coronation.

Tonga changed from Australian money to its own decimal currency in April. The new monetary unit is the *pa'anga,* which is approximately equivalent to U. S.$1.12.

The Tongan government approved a plan for more than 100 American Peace Corps volunteers to work in the islands beginning in January 1968. The group will include over 70 primary school teachers and several nurses and agricultural advisers.

A preliminary report on the November 1966 census of Tonga showed a total population of 77,429, an increase of more than 20,000 since the last census was taken in 1956. The island of Tongatabu was reported to have had the greatest increase.

Papua and New Guinea. A severe earthquake shook the Gazelle Peninsula of New Britain Island on August 14, extensively damaged buildings in Rabaul and Kokopo, and caused highway landslides. A few minor injuries were reported.

The new University of Papua-New Guinea began classes for degree students in Port Moresby in March. Lord Casey, governor-general of Australia, officially opened the new university on August 15.

An Australian mining company reported in August that reserves of at least 200 million tons of copper ore had been surveyed in Bougainville Island, in the portion of the Solomons under Papuan and New Guinean control.

Fiji. Under provisions of the constitution adopted in 1966, a new council of ministers replaced the previous executive council in the Fiji Islands government on September 1. Ratu Mara became the first chief minister of the colony. Although the council has executive authority, the colonial governor retains broad control over internal and external affairs and can veto any legislation.

PACIFIC ISLANDS OF THE UNITED STATES

Island or Group	Area (sq mi)	Area (km)	Population (mid-1966 est.)	Capital (1960 census)
American Samoa	76	197	27,000	Pago Pago (1,251)
Baker[1]	1	2.59	...	...
Bonin[2]	40	104	230[3]	...
Canton and Enderbury[4]	27	70	320[5]	...
Guam	212	549	79,000	Agana (1,642)
Howland[2]	0.6	1.6	...	...
Jarvis[2]	2.2	5.7	...	...
Johnston and Sand Islands[7]	...[6]	...	156[5]	...
Kingman Reef[7]	...[6]	...	...	...
Midway[7]	2	5	2,000	...
Palmyra[8]	4	10	...	...
Ryukyu Islands[2]	848	2,196	943,000	Naha (266,000)[3]
Trust Territory (Caroline, Mariana, and Marshall Islands)	687	1,779	94,000	Saipan (7,464)
Volcano	11	28	1,154[5]	...
Wake[1]	3	8	1,000	...

[1] Under administration of the Office of Territories, Department of the Interior. [2] Administered under military government by the United States. [3] 1965 est. [4] Jointly administered, as a condominium, by United Kingdom and United States. [5] 1960 census. [6] Less than 0.5 square miles. [7] Under U.S. Navy control. [8] Administered by the Federal Aviation Agency.

In July, Sir Norman Alexander was appointed to head the group that will plan the curriculum for the new University of the South Pacific. It is expected to open near Suva in March 1968. The university will serve English-speaking students from several territories in the South Pacific. Therefore, representatives from Western Samoa, Tonga, and the Cook Islands will also participate in the planning.

Construction of a copper ore processing mill began in August on Vanua Levu Island. When the mill is completed, copper concentrates will be shipped from there to Japan for refining.

Gilbert and Ellice Islands. A proposed new constitution will give greater control over internal affairs to the people of the British-owned Gilbert and Ellice Islands. It also provides for a house of representatives of up to 30 members and an 11-member government council with lawmaking powers.

Nauru. A joint statement issued by Australia, New Zealand, and the United Kingdom at the close of extended negotiations with Nauru in October promised full independence for the 3,000 Nauruans. On November 23, the UN Trusteeship Council recommended that Nauru become independent on Jan. 31, 1968.

United Nations Trust Territory. A resolution introduced to the U. S. Congress in August proposed that the Micronesian people of the Trust Territory of the Pacific Islands be granted a vote on their political future by 1972.

In November, Japanese Premier Sato visited the United States and won an agreement for the early return to Japan of the Bonin Islands and some of the Volcano Islands, which had been transferred to U. S. administration after World War II.

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PAINTING AND SCULPTURE. See ART.

PAKISTAN

Pakistan was calmer in 1967 than it had been in some years. The oppositon to President Mohammed Ayub Khan seemed enervated. Hostility toward India continued, but had lost strength. As Pakistan marked its 20th anniversary as an independent nation, it was experiencing relative prosperity, with increased industrial output, a substantial rise in exports, and a lessened dependence on foreign aid.

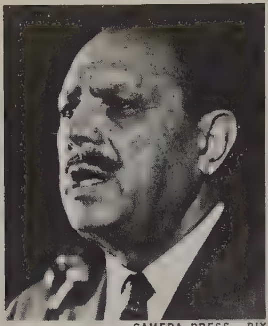
While claiming a desire for improved relations with India, Pakistan took few positive steps in that direction. Instead, President Ayub Khan made use of the tension to get more aid from Communist nations. Relations with the United States remained cool in the face of an American ban on military aid to both Pakistan and India.

Relations with India. Early in 1967, President Ayub Khan reiterated the need for rapprochement between his country and India, but argued that it could only come about when justice was achieved for the disputed Kashmir area. Despite Ayub Khan's belief in the "dormant fund of goodwill and friendship" that lay between the two nations, there was little evidence during the year that Indian-Pakistani relations had improved.

On February 2, several days after Ayub Khan's remarks, the Indian Air Force shot down an unarmed Pakistani single-engined civilian plane within Indian territory but close to the Pakistani border. India charged Pakistan with a violation of airspace, and Pakistan protested against the attack on a civilian plane in peacetime. Although the incident quickly assumed major dimensions, nothing came of it but continued ill will between the two countries.

A. N. I.

ISLAMABAD, the new capital of Pakistan, is site of hostel where members of National Assembly stay during sessions.


CAMERA PRESS—PIX

MOHAMMED AYUB KHAN, president of Pakistan, marked the 20th anniversary of Pakistani independence from Britain in August 1967 with a nationwide address in which he charged India with responsibility for the continuing discord between the two nations and minimized the dangers of Communist Chinese expansionism. Ayub's political power was virtually unchallenged. There had been some domestic opposition to his "one-man rule" before and after the presidential elections in January 1965, but it was dissipated by improving economic conditions.

Ayub Khan was born in Abbottabad, British India, on May 14, 1907. Educated at Aligarh Muslim University and at the Royal Military College in Sandhurst, England, he was commissioned in 1928 and rose through the ranks in the British Indian and Pakistani armies. He became commander in chief of Pakistani forces in 1951 and took over the presidency in October 1958. Two years later he was confirmed as president, and in 1962 he introduced a new constitution, replacing martial law with representative government.

Both nations continued their mad scramble for arms during the year, although few observers expected any renewal of serious hostilities. In an effort to slow the arms race, the United States announced on April 12 that it would no longer supply new arms to either country. Both Pakistan and India objected strongly. The Pakistani Army is largely American-armed, but Pakistan could continue to buy spare parts from the United States.

Relations with Other Nations. As usual, Pakistan's foreign relations revolved about its enmity with India and its need for economic aid, which totaled nearly $600 million in 1966–67. Thus when the United States cut off the sale of new military equipment to Pakistan and India, Pakistan retaliated by refusing to attend the semiannual meeting of the military advisers of the Southeast Asia Treaty Organization (SEATO). Pakistan's membership in the Central Treaty Organization (CENTO) also was maintained with little enthusiasm.

In recent years Pakistan has shifted its allegiance somewhat away from the countries of the West and has encouraged closer relations with Communist nations. Trade with the Communist bloc has nearly doubled in the last six years, and considerable economic aid and credits have been extended to Pakistan from those sources. In 1967 the Soviet Union pledged $12 million toward a new electrical power complex to be constructed in Pakistan. In general, Pakistan diplomatically supported the Arab states during their June 1967 embroilment with Israel.

At the same time, American nonmilitary aid continued. Late in 1966 the United States pledged $140 million in aid to Pakistan through the World Bank. In 1967 the U. S. Agency for International Development (AID) granted Pakistan $8.4 million for its agricultural program, and the U. S. Export-Import Bank provided $10 million to finance a satellite communications system linking East and West Pakistan. Great quantities of wheat also were provided. The U. S. Peace Corps program, however, was phased out during the year because Pakistan felt that it was paternalistic and ineffective.

Domestic Affairs. In August, Pakistan celebrated the 20th anniversary of its independence. The new capital city of Islamabad (14 miles, or 22.5 km, north of Rawalpindi) was dedicated, and on April 26, President Ayub Khan held his first cabinet session there. Construction at Islamabad is expected to be completed in 1975 at a cost of $200 million.

Ayub Khan continued to consolidate his "one-man rule" in 1967, and the opposition had never been so impotent. Early in the year, five of the six opposition parties coalesced to form the Pakistan Democratic Movement, demanding universal adult suffrage, but it has had little impact. The government demonstrated that it could effectively silence the opposition. In November it closed the opposition newspaper *Ittefaq* in East Pakistan. One of the chief opposition leaders, Miss Fatima Jinnah (the sister of the founder of Pakistan, Mohammed Ali Jinnah) died on July 8.

PAKISTAN • Information Highlights

ASIA
AFRICA

Area: 365,529 square miles (946,721 sq km).
Population: 105,044,000 (July 1, 1966, est.).
Chief Cities (1961 census): Rawalpindi, the temporary capital, 340,175; Karachi, 1,912,598; Lahore, 1,296,477.
Government: *President*—Mohammed Ayub Khan (took office for 2d 5-year term Jan. 2, 1965); *Parliament*—National Assembly, 156 members (East Pakistan, 78; West Pakistan, 78).
Religious Faiths: Muslims, 88% of population; Hindus, 11%; Christians, 1%.
Education: *Literacy rate* (1961), 19% of population aged 15 and over. *Total school enrollment* (1964)—8,845,699 (primary, 6,384,541; secondary, 2,401,640; teacher-training, 17,263; technical, 20,252; higher, 22,003).
Finance (1966–67 est.): *Revenues*, $1,200,000,000; *expenditures*, $780,000,000; *monetary unit*, rupee (4.7619 rupees equal U. S.$1).
Gross National Product (1965–66): $11,700,000,000.
National Income (1966): $9,723,000,000; average annual income per person, $93.
Economic Indexes (1965): *Industrial production*, 234 (1958=100); *agricultural production*, 129 (1956–57=100); *cost of living* (1966), 126 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,848,000; gasoline (1964), 487,000; sugar, 475,000; meat (1964), 351,000.
Crops (metric tons, 1966–67 crop year): Jute (1965–66), 1,155,000 (ranks 1st among world producers); chick peas, 583,000 (world rank, 2d); rice, 17,800,000 (world rank, 2d); wheat, 4,170,000; cottonseed, 865,000.
Minerals (metric tons, 1965): Limestone (1964), 1,900,000; coal (1966), 1,200,000; salt, 539,000; petroleum (1966), 507,600.
Foreign Trade (1966): *Exports*, $600,810,000 (chief exports, jute, $177,030,000; cotton, $41,790,000); *imports*, $878,640,000 (chief imports, 1965: nonelectrical machinery, $208,761,000; iron and steel, $125,538.000; unmilled wheat and maslin, $116,592,000). *Chief trading partners* (1965): U. S. (took 9% of exports, supplied 35% of imports); Britain (took 13% of exports, supplied 15% of imports).
Transportation: *Roads* (1964), 24,422 miles (39.302 km); *motor vehicles* (1965), 117,300; *railways* (1965), 7,039 miles (11,328 km); *merchant vessels* (1966), 60 (439,000 gross registered tons); *national airlines*, Pakistan International Airlines, Pakistan Aviation, Ltd.
Communications: *Telephones* (1966): 137,311; *television stations* (1967), 3; *television sets* (1967), 30,000; *radios* (1964), 549,000; *newspapers* (1964), 88.

President Ayub's autobiography, *Friends not Masters,* which deals mainly with the domestic political scene since 1958, was completed and published in 1967.

Economy. Pakistan's economic progress in recent years has been impressive. The annual rate of increase in the gross national product was 5.6% in 1966 and 7% in 1967. Two 5-year plans had been successfully completed since 1955 and a third (1965–70) was under way. Trade with Communist nations has substantially increased exports and brought a surplus in balance of payments. On Nov. 23, 1967, the giant Mangla Dam, the key part of the Indus basin irrigation and hydroelectric project, was inaugurated, and work proceeded on a project to build 2,600 miles (4,200 km) of dikes along the Ganges River to prevent saltwater erosion of agricultural land.

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PANAMA

Panamanian and U. S. negotiators set up tentative new treaties governing the Panama Canal and Canal Zone in 1967. However, there were strong objections in Panama to various treaty provisions, and ratification was in doubt.

Foreign Affairs. Two years of treaty negotiations between Panama and the United States ended in June with a joint announcement by Presidents Marco A. Robles and Lyndon B. Johnson that agreement on three new treaties had been reached at a negotiating level. The tentative agreements, subject to approval by the National Assembly of Panama as well as by the U. S. Senate, would abrogate the controversial 1903 treaty conceding to the United States sovereign rights over the Canal and the Canal Zone. Instead, responsibility for administration of the Canal would be transferred to a joint U. S.-Panamanian authority with five U. S. and four Panamanian members.

The new treaties would also give the United States the option of constructing a new sea-level waterway in Panama, authorize the presence of U. S. troops on the isthmus for defense purposes, and substantially increase Panama's revenues from tolls.

It appeared soon after the June announcement, however, that there was little chance for early ratification of the treaties. Robles' political opposition quickly voiced its objections to the negotiations, arguing that Panama had not gained U. S. withdrawal from the isthmus, that sovereignty over the Canal Zone had not been restored to Panama, and the waterway had not been neutralized.

Government spokesmen, headed by Foreign Minister Fernando Eleta, toured Panama defending and explaining the pacts. President Robles, however, probably to avoid direct attacks by political enemies, refused to endorse the treaties wholeheartedly, and in September he announced that he would send negotiators back to the United States to gain improvements. It was widely speculated that ratification of the treaties would not be possible until the May 1968 elections at the earliest.

In February, Panama became a signatory to a treaty declaring Latin America a nuclear-free zone. The Canal Zone, but not the waterway itself, was included in the accord. Member nations of the Central American Common Market renewed negotiations on Panama's bid for affiliation at meetings in Costa Rica in July and August.

Political Affairs. In 1967 various political groups chose their candidates for the 1968 presidential elections. President Robles endorsed Liberal David Samudio, a career politician and holder of many top-level political posts. It was not a popular choice and further weakened Robles' already flimsy 8-party government coalition. Some coalition segments backed second vice president Raúl Arango. The popular ex-president Arnulfo Arias, leader of Panama's largest and strongest political party, the Panamanian, also became a candidate for the presidency.

Economic Affairs. Panama's impressive annual growth rate of between 7% and 8% continued into 1967. While agricultural and construction activities declined, there were gains in manufacturing. Tax reforms introduced in 1964 had made an impact by 1967: 30% of Panama's revenues were derived from income taxes, as opposed to only 17% in 1961. It was expected that 1967 income would not only support the record $115 million budget but would also leave a slight surplus.

In January, the government's urban Robles Plan got under way, aided by $12 million in U. S. loans and grants. The funds financed improvements in schools, roads, housing, health centers, and job train-

PANAMA • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 29,208 square miles (75,650 sq km).
Population: 1,287,000 (mid-1966 est.).
Chief City (1966 est.): Panamá, the capital, 343,700.
Government: *President*—Marco A. Robles (took office Oct. 1, 1964). *Parliament*—National Assembly, 42 members (party seating, 1967: National Liberals, 8; Republicans, 4; other pro-administration parties, 16; Panamanian party, 12; other opposition parties, 2).
Major Religious Faith: Roman Catholics, 73% of population.
Education: *Literacy rate* (1960), 73% of population aged 15 and over. *Total school enrollment* (1964)—253,654 (primary, 196,412; secondary, 32,786; teacher-training, 1,351; technical, 16,799; higher, 6,306).
Finance (1966 est.): *Revenues,* $97,900,000; *expenditures,* $92,000,000; *public debt* (1965), $134,000,000; *monetary unit,* balboa (1 balboa equals U. S.$1).
Gross National Product (1965): $630,400,000.
National Income (1965): $529,900,000; average annual income per person, $424.
Economic Indexes: *Agricultural production* (1965), 139 (1956–57=100); *cost of living* (1966), 106 (1958=100).
Manufacturing (metric tons, 1965): Gasoline, 315,000; cement, 165,000; sugar (1966), 57,000; meat (1964), 30,000; beer, 29,200; lumber (1963), 31,000 cubic meters.
Crops (metric tons, 1966–67 crop year): Bananas (1963–64), 493,000; rice (1965–66), 156,000; coffee (1964–65), 4,400, dry beans, 8,000; cacao beans, 800.
Minerals (metric tons, 1964): Limestone and siltstone, 211,700; clay and shale, 45,000; salt (1965), 9,977.
Foreign Trade (1966): *Exports,* $89,430,000 (chief exports: bananas, $44,500,000; refined petroleum, $25,910,000; shrimp, $8,540,000; cacao, $200,000); *imports,* $214,490,000 (chief imports: crude petroleum, $46,080,000). *Chief trading partners* (1965): U. S. (took 61% of exports, supplied 41% of imports); Venezuela (supplied 20% of imports).
Transportation: *Roads* (1964), 3,845 miles (6,188 km); *motor vehicles* (1965), 40,520 (automobiles, 30,000); *merchant vessels* (1965), 571 (4,574,000 gross registered tons); *national airline,* Compañía Panameña de Aviación; *principal airport,* Panamá.
Communications: *Telephones* (1966): 46,446; *television stations* (1967), 8; *television sets* (1967), 83,000; *radios* (1965), 500,000; *newspapers* (1965), 10 (daily circulation, 101,000).

ing. There was further evidence of Panama's emerging role as a regional and world banking center in the opening of two more foreign banking operations in September.

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PANAMA CANAL AND CANAL ZONE

In 1967 tentative new treaties between the United States and Panama were drawn up; they gave Panama increased participation in management of the Panama Canal and Canal Zone and vastly increased income from the canal. The treaties are subject to ratification by the governments of both countries. (See also PANAMA.)

The Panama Canal, which crosses the Isthmus of Panama, connects the Atlantic and Pacific oceans. Its length is 51.2 miles from deep water to deep water, and 42.1 miles from shore to shore. It is located in a 10-mile-wide strip of land, the Canal Zone, which was leased "in perpetuity" to the United States by the Republic of Panama in 1903. Including tidal water, the Canal Zone covers 647.29 square miles. By articles 2 and 3 of the 1903 treaty, the United States was given jurisdiction in the area in exchange for a payment of $10 million and an annuity of $250,000, later increased to $1,930,000.

Population. The 49,433 residents of the Canal Zone in 1967 consisted almost entirely of employees of the U. S. government and their families, including 39,812 U. S. citizens.

Administration and Government. The Canal Zone government, with headquarters at Balboa Heights, was created by Congress. The governor of the Canal Zone, appointed by the president of the United States, is automatically president of the U. S. government-owned Panama Canal Company. The Panama Canal Company operates the canal and repays the net operating costs of the government (about $20 million annually) to the U. S. Treasury. Interest of $12 million a year on unrecovered U. S. investment in the Zone (almost $500 million) must also be paid.

In addition to the annuity, an estimated $115 million annually reaches the Panamanian economy through the Panama Canal and spending by the U. S. armed forces and other agencies in Panama.

Education. The school system in the Canal Zone is modeled after U. S. school programs, with Spanish emphasized as a language course. The Latin American schools, for non-U. S. citizens, are comparable in curriculum to schools in Panama, with classes conducted in Spanish.

Canal Traffic. In the fiscal year ending June 30, 1967, records were set for traffic, cargo tonnage, and tolls collected. (Traffic also increased slightly later in 1967 as a result of the closing of the Suez Canal after the Israeli-Arab War in June.) A total of 12,412 oceangoing commercial ships passed through the canal in fiscal 1967, carrying a cargo total of 86,193,430 long tons. Tolls paid by commercial ships, including both oceangoing and smaller vessels, were $76,808,701. High-bulk cargo groups that increased in tonnage in 1967 included petroleum products, which accounted for 16,801,655 long tons, and coal and coke, which accounted for 9,355,986 long tons.

Work continued in 1967 on the widening of the remaining 3.1-mile stretch of the Gaillard Cut.

PAPANDREOU, Andreas. See biographical sketch under GREECE.

PAPER INDUSTRY

A pause in the long-term expansion of paper and paperboard production in the United States occurred in 1967. Output eased to 46 million tons, down 1% from the record high established in 1966. The new supply of paper and paperboard—production plus imports, less exports—showed a similar pattern. Imports, largely newsprint from Canada, dropped 4%, to 7.2 million tons. Exports rose to a new high of 2.1 million tons as world demand for U. S. linerboard continued to increase. The resultant new supply of 51.1 million tons was about 2% below the 1966 total.

Actual consumption of paper and paperboard probably increased in 1967. Most of the decline in production occurred in the packaging grades—containerboard, boxboard, and, and coarse papers—reflecting reductions of inventories of packaged goods in the distribution channels. In 1966 consumers were adding to inventories, so that supply in that year exceeded consumption.

U. S. PAPER AND PAPERBOARD PRODUCTION
(In thousands of tons)

Type of paper and board	1964	1965	1966 (prelim.)	1967 (prelim.)
Newsprint	2,249	2,170	2,198	2,270
Total printing	5,584	5,906	6,512	6,450
Groundwood	995	1,041	1,097	1,060
Coated papers	2,620	2,752	3,057	3,130
Uncoated book	1,969	2,113	2,358	2,260
Fine	2,218	2,442	2,639	2,680
Coarse	4,384	4,610	4,714	4,650
Special industrial	970	1,080	1,163	1,130
Sanitary tissue	2,516	2,668	2,767	2,915
Tissue, excluding sanitary	231	237	236	235
Total paper	18,152	19,113	20,228	20,330
Containerboard	11,415	12,331	13,513	13,200
Special food board	1,847	1,880	2,203	2,200
Folding boxboard	3,313	3,452	3,501	3,460
Set-up boxboard	649	663	644	580
Cardboard	128	119	95	90
Other paperboard	2,253	2,420	2,526	2,410
Total paperboard	19,605	20,866	22,483	21,940
Wet machine board	148	145	138	135
Construction paper	1,533	1,575	1,517	1,500
Construction board	2,265	2,351	2,200	2,100
Total paper and board	41,703	44,049	46,567	46,005

Capital Expenditures. Expenditures on new plants and equipment reached a record high of $1.6 billion in 1967 as 3.5 million annual tons were added to paper and paperboard capacity. The addition of 3 million tons capacity was scheduled for 1968. Most of the 1967 and 1968 additions are in the containerboard grades, but a major increase in U. S. newsprint capacity is also coming into operation. Plans were announced in 1967 for new plant and equipment that will be completed in 1969 or 1970; this new capacity is concentrated in the printing grades.

Containerboard and printing papers, along with sanitary tissue papers and special food board, exhibit the strongest demand patterns.

Employment and Earnings. Despite the decline in production, industry employment continued to expand, rising from 671,000 to 684,000 employees. Total employee compensation rose 3.5% to an estimated $5.3 billion.

Raw Materials. Consumption of wood pulp continued to expand, moving above 37 million tons. Use of waste paper fell by about 8%, and use of other fibrous materials showed a larger decline. Virtually all the new paper and paperboard mills are oriented to wood pulp. In 1967 the industry used 56 million cords of pulpwood, approximately one fourth of the total volume of all wood cut.

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PARAGUAY

The Stroessner regime in Paraguay managed to get through 1967 without a serious effort by its opponents to unseat it. It made headway in social programs and foreign affairs; however, economic growth, on the whole, was slow.

Constitution. With presidential elections scheduled for 1968, and with a clause of the constitution of 1940 barring the president from seeking a third term in office, President Alfredo Stroessner did what many Latin American leaders had done before him—initiated the drafting of a more favorable constitution. The proclamation in August of the constitution of 1967 permitted Stroessner to run for office again. (He was reelected to another five-year term as president on Feb. 11, 1968.) The only other major change made in the governmental system by the new constitution was the substitution of a bicameral legislature for the former unitary Chamber of Deputies. The constitution did not, however, alter Paraguay's prevailing executive-oriented pattern of power.

The makeup of the constituent assembly reflected the freer political environment that began to evolve in 1965, when opposition parties were encouraged to run candidates for municipal offices. Stroessner's Colorado party elected 80 of the 120 delegates to the assembly, receiving its customary 70% of the vote. Other parties represented were Liberal Radicals (29), Liberals (8) and Febreristas (3).

Economic Affairs. At the end of 1966, Paraguay opened its first oil refinery, near Asunción. The plant has a daily capacity of 5,000 barrels. In 1967, Argentine investors announced plans to invest $200,000 in a meat-packing plant and winery.

The Inter-American Development Bank authorized loans to Paraguay's National Electric Administration in 1967 amounting to $14.5 million. The money will be used to complete a hydroelectric plant on the Acaray River, and to expand it from an original capacity of 45,000 kilowatts to 90,000 kilowatts.

However, the main trend was toward a sluggish economy. Lower agricultural production, due to bad weather and a decline in demand for Paraguayan exports, contributed heavily to the downward trend. In evaluating Paraguay's economic situation, a subcommittee for the Inter-American Committee on the Alliance for Progress (CIAP) called attention to the need for tax reform, pointing out that Paraguay loses about 2 billion guaraníes (approximately $15.9 million) annually in tax exemptions and undervaluation of goods subject to taxation.

Social Developments. At the same time, the CIAP congratulated Paraguay on its efforts to strengthen its overall development and took note of such new organizations as the national councils for education and industrial planning, and a national service to fight foot-and-mouth disease in livestock.

The minister of public health in 1967 initiated a $7 million program aimed at eliminating malaria in Paraguay. The government will pay $3.5 million toward the project, and the remainder will come from the U. S. Agency for International Development, the Pan American Health Organization, and the United Nations Children's Fund (UNICEF). The U. S. Public Health Service will send technicians to assist regional health organizations and units of local government in Paraguay.

Foreign Affairs. President Stroessner's regime demonstrated in 1967 that it was veering away from Paraguay's ancient policy of suspicion of its neighbors, and was prepared to take a more positive role in the affairs of the region. Paraguay was host to a meeting of representatives of two Latin American economic blocs during the year, the Latin American Free Trade Association and the Central American Common Market. The week-long conference focused on a draft plan to merge the two blocs.

Stroessner visited Argentina at the end of July 1967 as the guest of President Juan Onganía. The two presidents signed mutual cultural and economic pacts and declared themselves ready to take joint action against hostile infiltrators. The countries also agreed to plan jointly for a $150 million to $300 million hydroelectric plant on the Paraná River, to be financed mostly by international sources.

A new U. S. ambassador to Paraguay, Benigo C. Hernandez, was appointed in June 1967.

LEO B. LOTT
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PARK CHUNG HEE. See biographical sketch under KOREA.

PAUL VI. See biographical sketch under RELIGION.

PARAGUAY • Information Highlights

AFRICA
SOUTH AMERICA

Area: 157,047 square miles (406,752 sq km).
Population: 2,161,000 (June 30, 1967, est.).
Chief Cities (1962 prelim. census): Asunción, the capital (includes Lambaré), 305,160; Encarnación, 18,504; Concepción, 18,031; Luque, 10,834.
Government: *President*—Gen. Alfredo Stroessner (took office Aug. 15, 1963). *Parliament*—Chamber of Deputies, 60 members (party seating, 1967: Colorado party, 40; Liberal party, 20).
Religious Faiths: Roman Catholics, 92% of population.
Education: *Literacy rate* (1962), 74% of population aged 15 and over. *Total school enrollment* (1962)—356,459 (primary, 323,208; secondary, 17,122; teacher-training, 8,131; technical, 4,239; higher, 3,759).
Finance (1965 est.): *Revenues*, $37,986,000; *expenditures*, $39,214,000; *monetary unit*, guaraní (126 guaraniés=U. S.$1).
Gross National Product ((1966): $461,000,000.
National Income (1963): $334,000,000; average annual income per person, $175.
Cost of Living Index (1966): 158 (1958=100).
Manufacturing (metric tons, 1965): Sugar (1966), 36,000; cement, 29,000; cotton yarn (1964), 10,500; beer, 7,800.
Crops (metric tons, 1965–66 crop year): Cassava, 1,437,000; bananas (1964–65), 195,000; maize, 166,000; citrus fruit, 136,000; sweet potatoes and yams, 100,000; dry beans (1964–65), 24,000; rice (1964), 22,000; peanuts, 19,000; cottonseed (1967), 18,000; soybeans (1964), 18,000; tobacco, 17,000; cotton lint, 9,000; coffee (1964), 7,000.
Minerals (metric tons): Limestone (1964), 67,200.
Foreign Trade (1966): *Exports*, $49,380,000 (chief exports: meat, $13,840,000; timber, $10,760,000; oilseeds, $4,320,000; quebracho extract, $3,090,000); *imports*, $49,450,000 (chief imports, 1965: machinery, $9,650,000; wheat products, $4,520,000; iron and steel products, $3,120,000). *Chief trading partners* (1965): Argentina (took 25% of exports, supplied 20% of imports); U. S. (took 24% of exports, supplied 21% of imports).
Transportation: *Roads* (1964), 7,786 miles (12,530 km); *motor vehicles* (1965), 20,000 (automobiles, 10,870); *railways* (1965), 309 miles (497 km).
Communications: *Telephones* (1966): 13,962; *radios* (1962), 160,000; *newspapers* (1964), 8.

COURTESY OF THE PEACE CORPS

COURTESY OF THE PEACE CORPS

(Above) Peace Corps Volunteer Gertrude Solomon, 55, of Tarzana, Calif., working as a Peace Corps nurse in Ethiopia, massages the foot of a child recovering from poliomyelitis.

(Left) Peace Corps member Theresa Ricks, of Hollis, N. Y., serves as a volunteer nurse in Brazil. Here she attends a young patient in a hospital ward in Rio de Janeiro.

PEACE CORPS

The Peace Corps continued to expand in 1967. On March 1, as Jack H. Vaughn completed his first year as Peace Corps director, the agency went into its seventh year of operations.

Growth. Peace Corps volunteers moved into seven new countries in 1967. For the first time, volunteers were invited to serve in Gambia, Upper Volta, Lesotho, and Dahomey in Africa, and in Western Samoa, Tonga, and Fiji in the South Pacific. Ceylon, where the Peace Corps program was discontinued after 1964, became the first country to invite the return of volunteers.

More than 14,000 volunteers were in training or in the field in 50 countries in mid-1967, and 17,750 were expected in 58 countries by mid-1968. In September, the 30,000th volunteer departed for overseas duty and the 15,000th volunteer returned to the United States.

Activities. The training of Peace Corps volunteers shifted slightly from college campuses in 1967 to in-

COUNTRIES SERVED BY THE PEACE CORPS
(Number of volunteers by area and country, as of Oct. 31, 1967)

Country	In training	In the field	Total
Africa			
Botswana	...	56	56
Cameroon	22	70	92
Chad	41	28	69
Dahomey	31	...	31
Ethiopia	...	441	441
Gabon	...	60	60
Gambia	...	18	18
Ghana	...	258	258
Ivory Coast	10	85	95
Kenya	54	272	326
Lesotho	87	1	88
Liberia	...	275	275
Libya	...	13	13
Malawi	43	160	203
Morocco	43	86	129
Niger	...	128	128
Nigeria	...	347	347
Senegal	1	128	129
Sierra Leone	...	302	302
Somalia	...	101	101
Tanzania	...	225	225
Togo	...	109	109
Tunisia	...	243	243
Uganda	34	130	164
Upper Volta	2	45	47
Total	368	3,581	3,949
Asia			
Afghanistan	...	216	216
Ceylon	65	...	65
India	77	940	1,017
Iran	57	300	357
Malaysia	278	573	851
Nepal	27	225	252
Philippines	...	804	804
South Korea	209	201	410
Thailand	40	327	367
Turkey	...	230	230
Total	753	3,816	4,569
Latin America			
Bolivia	43	258	301
Brazil	87	624	711
British Honduras	15	41	56
Chile	2	420	422
Colombia	38	693	731
Costa Rica	...	138	138
Dominican Republic	...	151	151
Eastern Caribbean	60	99	159
Ecuador	36	275	311
El Salvador	1	114	115
Guatemala	...	101	101
Guyana	...	52	52
Honduras	...	142	142
Jamaica	...	129	129
Panama	88	153	241
Paraguay	32	34	66
Peru	...	347	347
Uruguay	32	22	54
Venezuela	45	372	417
Latin American regional	88	...	88
Total	567	4,165	4,732
Pacific			
Fiji	86	...	86
Micronesia	133	564	697
Tonga	121	40	161
Western Samoa	114	83	197
Total	454	687	1,141
Grand total	2,142	12,249	14,391

U.S.
PEACE
CORPS

MEMBERS of the Peace Corps in Nigeria set up quarters on the campus of Lagos University following evacuation from area of rebel fighting.

WIDE WORLD

house (Peace Corps-owned) and in-country training sites. Two out of five trainees received part of their training in the country of assignment. Trainees are each given 300 to 450 hours of language instruction. The Peace Corps, one of the largest language-training institutions in the United States, has taught more than 180 languages.

In the summer of 1967, the Volunteers in Service to America (VISTA) and the Peace Corps coordinated a program which sent 500 college juniors to work on Indian reservations and in depressed urban and rural areas in the United States. Following college graduation, some of them will complete overseas training and receive assignments as Peace Corps volunteers. Under other special pre-training programs, Indians and some Job Corps trainees were helped to qualify for Peace Corps service. (See also Anti-Poverty Program.)

In 1967 the corps' School Partnership program was developed substantially in order to build about 300 schools overseas. Since 1964, when the program started, 639 U. S. schools have contributed about $524,000 to the construction of 500 schools in 39 countries.

Volunteers were withdrawn from Mauritania in June 1967 when that country broke diplomatic relations with the United States over the Israeli-Arab war. Later in the summer, when civil war broke out in Nigeria, 200 volunteers were evacuated from its Eastern and Midwestern regions. The Peace Corps program in Pakistan was also phased out during the year. In December it was announced that the Peace Corps would withdraw from Gabon at the request of that government.

More than 400 Peace Corps programs were operating overseas in 1967, with volunteers engaged in a wide variety of activities. Education, however, continued to be the principal field of Peace Corps service. The majority (49%) of volunteers were active in a teaching capacity, from nursery school through university level. Urban and rural community action occupied 25% of active volunteers, 10% in health, 11% in agriculture, and the remainder in public administration, public works, and a wide variety of other fields.

In 1967 the Peace Corps was the largest single employer of college graduates in the United States. More than 3.7% of the year's 562,000 graduating college seniors applied for service as volunteers in the Peace Corps.

Budget. Tight control on management and fiscal policies led to improved programming, recruiting, selection, and training in 1967. The cost of each volunteer was reduced from $7,867 in 1966 to $7,453 in 1967. The director of the Peace Corps returned $5 million of the year's $110 million appropriation to Congress and received $107.5 million for the fiscal year beginning on July 1.

Special Studies. The Peace Corps Division of Research made a survey of 4,260 volunteers who completed their service in 1966. The study found that 94% of them would join the Peace Corps again, 82% would serve in the same country, and 75% would choose the same kind of work.

Jack H. Vaughn
Director of the Peace Corps

PEARSON, Lester Bowles

Prime Minister of Canada: b. Toronto, Ontario, Canada, April 23, 1897.

On Dec. 14, 1967, Prime Minister Pearson submitted his resignation as leader of the Liberal party and announced that he would retire from the premiership, and politics, as soon as the party chose his successor—probably early in 1968. During 1967, Pearson had become increasingly mired in political controversies. Dissatisfaction in Quebec with that province's status in confederation became more vocal and divisive. In the ideological and verbal maelstrom between separatists and unionists, Pearson's attempts at moderation cost him support in both French and "English" Canadian circles. Finally, throughout the year he was plagued by rivalry among aspiring successors in his cabinet.

Domestic Affairs. Pearson announced in January that Walter Gordon, former minister of finance and a proponent of Canadian economic nationalism, would return to the cabinet. The prime minister reiterated in a nationwide television speech that Gordon's reappointment did not foreshadow any change of government policy regarding foreign investments. At the end of March, Pearson's minority government faced possible defeat over its measure to unify Canada's defense forces. In two press conferences, Pearson made it clear that he would permit no delay, and the use of closure finally stopped the debate.

In late July, Pearson faced a major crisis when French President Charles de Gaulle used the occasion of a visit to Expo 67 to embarrass the Canadian government. De Gaulle's call for "Québec libre" (independence for Quebec) in Montreal was welcomed by separatists, but condemned by nationalists as an unwarranted interference in Canadian

UPI

PRIME MINISTER PEARSON announces on December 14 that he will resign his office and Liberal party leadership.

domestic affairs. After a day-long cabinet meeting, Pearson issued a mild rebuke to de Gaulle, who thereupon departed without visiting Ottawa. The de Gaulle affair sparked Quebec separatism in succeeding months, and Pearson was attacked by nationalists for his moderation. A poll in October indicated that a large majority of Canadians would have voted against the Pearson government if given the chance.

Foreign Policy. Pearson's 1956 diplomatic success in arranging the United Nations peace-keeping operation between Egypt and Israel was reversed by the Israeli-Arab War of June. In the diplomatic stalemate that followed the war, Pearson was unable to get UN support for his compromise solution, and both Israel and the Arab states criticized Canada's moderate stand in the crisis. Similarly, Pearson's attempts to keep Canada neutral regarding Vietnam irritated both pro- and anti-interventionists. His refusal to stop arms shipments to the United States angered Canadian "doves," and his efforts toward a political peace by "quiet diplomacy" were rejected by both belligerents.

Background. Pearson left a teaching career in 1927 to enter Canada's diplomatic service. In 1945 he was instrumental in launching the UN, and in 1957 he was awarded the Nobel Peace Prize for his role in ending the Suez crisis of 1956. Brought into elective politics by Prime Minister Mackenzie King, he became party leader in 1958 and prime minister in 1963. See also CANADA.)

JOHN S. MOIR
University of Toronto

PEDIATRICS

Major advances in the field of pediatrics in 1967 concerned a new method of preventing Rh disease in infants and the study and development of vaccines against common childhood diseases. There was also a controversy over the screening of infants for phenylketonuria (PKU), a rare metabolic disease.

Rh Disease. Prospects that Rh disease (known medically as erythroblastosis fetalis) can be prevented seemed good, thanks to some outstanding research in this area. In this disease, a mother with Rh-negative blood makes antibodies against the Rh-positive red blood cells of her baby. Although her first child is unaffected by these antibodies, any subsequent child will suffer severe reactions if the antibodies cross the placental barrier and destroy the infant's blood cells. When this happens, the infant becomes anemic and has a high level of bilirubin (a pigment formed in the breakdown of hemoglobin), producing jaundice.

Initial attempts to prevent the development of maternal antibodies by the administration of anti-Rh gamma globulin to susceptible Rh-negative women have been encouraging. In one study, the gamma globulin was given to 28 Rh-negative women following the birth of Rh-positive babies. Each woman then had a normal second infant. In contrast, 25 women who received no gamma globulin had 10 erythroblastic second babies.

Rh disease is known to produce severe brain damage if the infant is not treated promptly. Proper treatment usually consists of replacing the baby's Rh-positive blood with Rh-negative blood. Until recently, the effects of proper treatment had not been fully evaluated. Recently, 129 American children were carefully studied five years after they had been treated for Rh disease. It was found that their mean IQ was normal and that only seven of them showed residual effects. All seven had some hearing impairment, three had speech difficulties, and one was mentally retarded. In a comparable Japanese study, no cases of mental retardation were observed except where the concentration of bilirubin had been unusually high because of the severity of the disease or of a delay in in treatment.

Vaccines. The widesperad availability of a measles vaccine was followed by a fivefold decrease in the incidence of the disease during 1967. The single-shot, live-virus vaccine proved to be 97% to 100% effective when given to susceptible children, and probably provided them with lifelong immunity.

A rubella (German measles) vaccine is currently in the experimental stage. The need for the vaccine is great, especially for women of childbearing age. In 1966, of the approximately 30,000 infants born to mothers who had contracted rubella early in pregnancy, 6,000 died and at least 7,500 showed evidence of mental retardation.

A vaccine against mumps was successful in a large, controlled experiment. Protection, probably permanent, was estimated at 97% when the vaccine was given during a mumps epidemic. Over half of the untreated children developed the disease. Although mumps is a relatively harmless disease in children, serious complications may occur in adults.

PKU Screening. The present screening program to detect phenylketonuria (PKU) in newborn infants has been very successful, helped in part by the discovery that the incidence of PKU is about one in 10,000, a rate of incidence twice that earlier estimated. However, it is still unclear which of these infants need a phenylalanine-restricted diet.

Since some infants with positive test results will have normal intellectual and physical development, and also because the diet itself may retard growth, authorities do not agree on the course to follow. Some argue for additional mass screening, not only for PKU but also for other rare metabolic diseases that can be detected by chemical tests before obvious symptoms appear. Others stress the need for caution before these programs are expanded, noting the economic problems of so doing and suggesting that the value of treatment by diet or other means be fully evaluated before massive screening efforts are undertaken. Each side has its enthusiastic supporters and the debate will certainly continue.

WILLIAM E. SEGAR
Mayo Clinic, Rochester, Minn.

PENNSYLVANIA
STATE POLICE

STATE POLICE in Pennsylvania watch highways for possible violence during an 8-state truck strike by steel haulers during the fall of 1967.

UPI

PENNSYLVANIA

Important developments in Pennsylvania in 1967 included preparation for a constitutional convention, bitter legislative battles over proposed new revenue bills, and the issue of state aid to parochial schools. A lengthy, violence-ridden strike by steel haulers disrupted the economy of western Pennsylvania in the early fall.

Constitutional Revision. In the May 16 primaries the electorate approved convocation of a constitutional convention to deal with major portions of the 94-year-old state constitution. The convention, which opened on December 1, was to deliberate for three months, and its proposals were to be submitted to the electorate in April 1968. Republicans had an 88–75 majority in the convention, but the highest positions were evenly divided between the two parties. The convention was authorized to consider revision of articles dealing with the judiciary, taxation and finance, local government, and reapportionment. It was barred from proposing revision of the "uniformity clause," which has been interpreted judicially as prohibiting a state graduated income tax. The possibility that the clause might be altered to permit such a tax played a major role in the defeat of convention calls in 1953 and 1963.

The May primaries also brought ratification by the electorate of a number of constitutional amendments. These strengthened the office of governor in several ways, among them by permitting a governor to succeed himself (for a total of two consecutive four-year terms). Procedure in the state legislature was streamlined and simplified, and the lawmakers were empowered to meet during their entire term in office. The voting residence requirement was reduced from 12 months to 3 months, and provision for absentee voting made mandatory.

Legislative Issues. Gov. Raymond P. Shafer's proposed $1.8 billion budget for fiscal 1968 ran into serious trouble in the General Assembly in spite of Republican majorities in both houses. Controversy centered not only on the need for an additional $267 million in tax revenues but on the means of raising the revenues. There was heavy opposition in both parties to two of Governor Shafer's proposals—extending the current 5% sales tax to items now exempt, such as clothing, and levying 1% on adjusted net income as reported to the federal government. A 5-cent rise (from 8 cents to 13 cents) in the state cigarette tax was approved in October, a measure expected to yield $43 million in additional revenue for the 1968 fiscal year.

An object of major controversy was the so-called Mullen bill, which, by circumventing the state constitution's prohibition on state aid to sectarian schools, would in effect provide such aid. The bill, introduced in June by state Rep. Martin P. Mullen, Democrat of Philadelphia, would create a State Nonpublic School Authority to enter into contracts with nonpublic schools to furnish secular education

PENNSYLVANIA • Information Highlights

Area: 45,333 square miles (117,413 sq km).

Population: 11,626,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Harrisburg, the capital, 75,000; Philadelphia, 2,030,000; Pittsburgh, 560,000; Erie, 136,000; Allentown, 106,500; Scranton, 105,000; Reading, 94,500.

Government: *Chief Officers*—governor, Raymond P. Shafer (Republican); lt. gov., Raymond J. Broderick (R); secy. of state, Joseph Kelly; atty. gen., William C. Sennett; treas., Thomas Z. Minehart; supt. of publ. instr., David H. Kurtzman; chief justice, John C. Bell, Jr. *Legislature*—General Assembly (convened Jan. 3, 1967): Senate, 50 members (27 Republicans, 22 Democrats, 1 vacancy); House of Representatives, 203 members (101 R, 99 D, 3 vacancies).

Education: *School enrollment* (1965–66)—public elementary, 1,246,015 pupils (43,716 teachers); public secondary, 982,992 pupils (45,293 teachers); nonpublic, 680,300 pupils (20,510 teachers); college and university (fall 1965), 287,551 students. *Public school expenditures* (1965–66)—$1,151,000,000 ($565 per pupil); average teacher's salary, $6,410.

Public Finance (fiscal year 1967): *Revenues*, $3,278,812,304 (5% sales tax, $643,828,644; motor fuel tax, $269,376,883; federal funds, $577,083,473). *Expenditures*, $3,056,140,112 (education, $751,746,130; health, welfare, and safety, $528,177,559; highways, $561,201,505). *State debt, net*, $130,293,639 (June 30, 1967).

Personal Income (1966): $34,434,000,000; average annual income per person, $2,968.

Public Assistance (fiscal year 1967): $211,982,642 to 366,617 recipients (dependent children, $108,371,122).

Labor Force (employed persons, June 15, 1967): *Agricultural*, 107,500; *nonagricultural* (wage and salary earners), 4,627,900 (33.3% manufacturing, 16.5% trade, 12.3% government). *Unemployed persons* (June 15, 1967)—198,000.

Manufacturing (1965): Value added by manufacture, $17,074,543,000 (transportation equipment, $1,012,447,000; primary metals, $3,737,075,000; nonelectrical machinery, $1,551,608,000; electrical machinery, $1,616,879,000; fabricated metals, $1,132,283,000; food and products, $1,455,888,000).

Agriculture (1966): *Cash farm income*, $935,769,000 (livestock, $674,910,000; crops, $238,437,000; govt. payments, $22,422,000). *Chief crops* (tons)—hay, 3,426,000; corn for grain, 921,984; wheat, 432,000; potatoes, 315,800.

Mining (1966 est.): *Production value*, $903,064,000 (ranks 4th among the states). *Chief minerals* (tons)—bituminous coal, 82,100,000; stone, 59,239,000; sand and gravel, 18,317,000; anthracite coal, 13,000,000.

Transportation: *Roads* (1967), 112,969 miles (181,801 km); *motor vehicles* (1967), 5,676,031; *railroads* (1965), 8,702 track miles (14,002 km); *airports with scheduled service* (1966), 61.

Communications: (1966): *Telephones*, 6,033,200; *television stations*, 20; *radio stations*, 250; *newspapers*, 116 (daily circulation, Sept. 1965, 4,025,109).

to their own pupils. The schools would be reimbursed by the authority with funds from the cigarette tax rather than from appropriation money. The failure of the bill to be discharged from committee killed its chances of passage in 1967.

Meanwhile, the Assembly passed a new fair housing law, which by comparison with the original law of 1961 provides considerably stronger enforcement, as well as an increase in coverage from approximately 35% to 90% of all housing in the state. Reform of the Philadelphia magistrate courts, a perennial issue that can be resolved only through state legislation, was postponed but was expected to be proposed at the constitutional convention.

Labor Disputes. A wildcat walkout by 15,000 steel haulers in Pittsburgh, western Pennsylvania, and adjoining states produced widespread violence and economic disruption throughout the country's northeastern industrial belt between August and October. It was led by truckers who own their vehicles and lease them to companies that have contracts with steel producers. Many of them are members of the Teamsters Union. Although the current Teamster contract runs until 1970, the strikers put forward a demand for a separate contract and a higher share of freight revenues. In negotiations that brought the active participation of Governor Shafer and representatives from adjoining states, strike leaders finally settled for a reduction in the hours of unpaid "waiting time" involved in the loading of steel.

New National Historic Site. The White House announced on November 29 that former President and Mrs. Dwight D. Eisenhower had deeded their farm near Gettysburg to the United States as a national historic site.

(See also PHILADELPHIA.)

ROBERT J. OSBORN
University of Pennsylvania

PERCY, Charles Harting

U. S. senator from Illinois: b. Pensacola, Fla., Sept. 27, 1919.

During his first year as senator from Illinois, Republican Charles Percy was appointed to several Senate committees and cosponsored a number of bills, including an antiriot bill and one on pollution.

SEN. CHARLES H. PERCY of Illinois testifies at a hearing of the Foreign Relations Committee on August 21.

WIDE WORLD

His legislative work impressed many observers, and he was often mentioned as a possible dark horse candidate for the Republican presidential nomination in 1968. Although Percy maintained that he was not a candidate for the presidency in 1968, Sen. Everett Dirksen of Illinois in September announced that he would support Percy as a favorite son candidate at the Republican Convention. Percy has been linked to the moderate wing of the Republican party along with other Republican freshmen senators such as Edward Brooke of Massachusetts and Mark Hatfield of Oregon.

Legislative Record. Senator Percy was appointed to the Senate Banking and Currency Committee, the Aeronautical and Space Services Committee, and the Joint Economic Committee. In April he introduced a major housing bill (National Home Ownership Foundation Act). The proposed bill was a follow-through on his 1966 campaign idea for encouraging home ownership among low-income families.

Percy also cosponsored other bills offering tax credits for private programs of pollution control, job training in industry, and for expenses of college education. In August he cosponsored an antiriot bill, with Sen. Abraham Ribicoff of Connecticut.

Position on Vietnam. In 1967, Percy expanded his criticism of the administration's policy in Vietnam. In March he supported New York Sen. Robert Kennedy's proposal for suspension of U. S. bombing of North Vietnam. Speaking before the American Society of Newspaper Editors in Washington, last April Percy proposed a peace settlement that would eventually allow the Vietcong to become "a legal political party competing peacefully at the polls and shunning violence." In May, he cosigned a statement calling for negotiation and warning against activities that might bring Red China into the conflict. When Percy visited South Vietnam in December he narrowly escaped injury when he and his party were fired up on by the Vietcong.

Background. Percy graduated from the University of Chicago in 1941 with a degree in economics. He went to work for the Bell and Howell Company, becoming the company's president by the time he was 29 years old.

In 1966, Percy defeated incumbent Sen. Paul Douglas by over 400,000 votes. Until then Percy's political experience had been confined to administrative positions in Republican organizations and an unsuccessful race for governor of Illinois in 1964.

SAMUEL K. GOVE
University of Illinois

PERIODICALS. See MAGAZINES.
PERSIA. See IRAN.

PERU

Great tension was generated in Peru in 1967 over the rapid inflation that has plagued the country in recent years despite economic growth. In September the official value of the sol, the Peruvian monetary unit, was reduced.

Economy. In 1967 several new hydroelectric plants went into operation. New plants beginning production included a $1.4 million pharmaceutical manufacturing plant owned by Charles Pfizer and Company, two Japanese automotive plants—a $1 million assembly plant for Nissan automobiles and an assembly plant for Isuzu trucks—and a £100,000 assembly plant for British Triumph-Standard automobiles. Kaiser Aluminum and Chemical Corporation invested $100 million in phosphates in the Sechura Desert; construction began on Peru's first poultry processing plant; and an agreement was signed to expand the telephone system of the Lima area. The Agency for International Development (AID) announced in May that it was supporting 22 assistance projects and 37 loan projects in Peru.

Despite this rapid economic growth, uneven economic development caused a crisis in 1967. In 1966 the economy had grown at the rate of 5.5%, but inflation went up 10%. In 1967 a fall in the price of fishmeal (one of the country's largest exports), a drop in cotton production of about 24%, a government deficit of about $200 million, and an unfavorable balance of trade led to a devaluation of the sol on September 1. From 26.82 soles to the U. S. dollar, the price fell to 39.15 to the dollar by the end of October. During the crisis, Peru's reserves dropped to $70 million.

The devaluation of the sol and continued rises in prices produced great unrest and sharp political struggles. A general strike in Arequipa, followed by sympathy strikes in Cuzco and Mollendo, paralyzed commerce in southern Peru in October.

Despite its economic difficulties, Peru was able, for the first time in about 40 years, to place a bond issue for $12.5 million to finance highway construction. Work continued on a marginal highway destined to open the Amazon backlands, and on September 30, President Fernando Belaúnde Terry inaugurated a section of the road along the Huallaga River.

Political Affairs. Politics was heated, but there were no major upheavals during the year. The guerrilla activities that had broken out in the eastern jungles of Peru in 1965–66 were ended. The ruling coalition of the American Popular Revolutionary Action party (Apra) and the National Union party (UNO) continued to control the legislature. The lawmakers voted no-confidence in the minister of education in December 1966 and in the minister of government and police in July 1967, forcing both to resign. These were the 9th and 10th ministers censured since President Belaúnde took office in 1963. There was much dispute between the coalition and the executive branch of government over how to handle the government's deficit; the executive favored higher tariffs and the coalition opposed them.

On July 28, when the new session of the legislature was supposed to open, a boycott by a minority of senators supporting the executive prevented its convening. The boycott was begun during a dispute over who was to be the new president of the Senate and continued for 38 days. When agreement was reached, the legislature convened with a member of the UNO as president of the Senate and a member of Apra as president of the Chamber of Deputies. A new cabinet was sworn in on September 7, with Edgardo Seoane Corrales, the first vice president of the republic and secretary-general of the Popular Action party, as prime minister.

Elections. In an important by-election on November 14, held to fill a vacancy in the Chamber of Deputies for Lima, the candidate supported by the Apra-UNO coalition was elected.

The Military. There was much international concern in 1967 over Peru's purchase of supersonic fighter-bomber planes from France. The United States had blocked Peru's intended purchase of fighter planes from Britain, claiming that a country in a financial crisis should not buy military planes, especially after the United States had given Peru $300 million in economic aid and $45 million in military aid since World War II. The Peruvian government, after being rebuffed by the United States and Britain, bought 12 supersonic Mirage-5 fighter-bombers from France. This action also stimulated arms purchases by Argentina and Chile.

Nuclear-Free Area. On February 14, Peru joined 13 other Latin American states in signing a treaty banning nuclear weapons from Latin America, thus establishing the first inhabited nuclear-free zone.

HARRY KANTOR
University of Florida

PERU • Information Highlights

SOUTH AMERICA

Area: 496,222 square miles (1,285,216 sq km).
Population: 12,385,000 (June 30, 1967 est.).
Chief Cities (1961 census): Lima, the capital, 1,436,231; Callao, 155,953; Arequipa, 135,358; Trujillo, 100,130.
Government: *President*—Fernando Belaúnde Terry (took office July 28, 1963); *Prime Minister*—Edgardo Seoane Corrales (took office Sept. 7, 1967). *Legislature*—Senate, 45 members; party seating, 1966: Coalition of Partedo Acción Populace and Partido Democracia Christiana (withdrew Nov. 13, 1967), 19; Partido Aprista Peruvians (APP), 15; Union Nacional Odriísta, 6; others, 5. Chamber of Deputies, 132 members; party seating, 1966: Coalition of Partedo Aprista Peruvians and Union National Odriísta, 79; Partido Acción Populace, 34; Democracia Christiana, 12 (withdrew Nov. 13, 1967); other, 7.
Religious Faiths: Roman Catholics, 95% of population.
Education: *Literacy rate* (1961), 61% of population aged 17 and over. *Total school enrollment* (1963–64)—2,248,694 (primary, 1,876,825; secondary, 260,736; technical, 64,799; higher, 46,334.
Finance (1966 est.): *Revenues*, $755,000,000; *expenditures*, $755,000,000; *monetary unit*, sol (39.15 soles equal U. S.$1).
Gross National Product (1966): $5,027,300,000.
National Income (1963): $2,517,000,000; average annual income per person, $230.
Economic Indexes: *Agricultural production* (1965), 127 (1956–57=100); *cost of living* (1966), 209 (1958=100).
Manufacturing (metric tons, 1965): Sugar (1966), 840,000; gasoline, 711,000; wheat flour (1964), 396,000.
Crops (metric tons): Potatoes (1964–65), 1,531,000; maize (1965–66), 570,000; cassava (1964–65), 497,000; rice (1965–66), 300,000; cottonseed (1966–67), 208,000.
Minerals (metric tons, 1965): Silver, 35,255,411 troy ounces (ranks 3d among world producers); iron ore, 7,315,200; crude petroleum (1966), 3,048,000; crude limestone (1964) 1,102,666; copper, 177,600; guano, 169,000; salt, 124,259.
Foreign Trade (1966): *Exports*, $763,000,000 (chief exports: copper, $186,314,000; fish meal, $181,651,000; sugar, $46,-364,000); *imports*, $817,000,000 (chief imports, 1964: nonelectrical machinery, $117,000,000; transport equipment, $65,000,000). *Chief trading partners* (1965): U. S. (took 35% of exports, supplied 41% of imports); West Germany (took 13% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 25,276 miles (40,677 km); motor vehicles (1965), 253,738 (automobiles, 155,038); *railways* (1965), 1,509 miles (2,428 km); *merchant vessels* (1966), 26 (128,000 gross registered tons); *national airline*, Aerolíneas Peruanas SA; *principal airport*, Lima.
Communications: *Telephones* (1966): 136,882; *television stations* (1965), 16; *television sets* (1965), 210,000; *radios* (1964), 2,100,000; *newspapers* (1959), 53.

PETROLEUM

The oil industry learned an important truth in 1967: it must continue to seek widely diversified and reliable sources of crude oil. Petroleum's value as a weapon of war was emphasized by the events of the Israeli-Arab war. These events included the blockage of the Suez Canal, the embargo on oil exports from Arab countries to the United States and Britain, and the bombing of Egyptian refineries by Israel. As a result, major oil-consuming nations began intensifying their exploration in more politically stable regions, including Australia, Alaska, the North Sea, and continental Europe.

Production. World output of crude oil reached 34,795,500 barrels per day (b/d) in 1967, an increase of 6.2% over 1966. The percentage gain was almost the same in both the Eastern and the Western Hemispheres, reflecting the effects of the Middle East crisis. (Normally, the eastern half of the world would have grown about 9% and the western half 3%.) The volume growth in the Middle East—440,000 b/d—was only half of what it had been a year earlier. African production, only partially affected by the conflict, maintained healthy progress, reaching almost 3 million b/d. The USSR increased its output 6.3%, to 5,600,000 b/d, so that it supplies 16.1% of the world's total crude oil.

In the Western Hemisphere, the United States again had a vigorous growth, 5.6%, to a level of about 8,800,000 b/d. Canada went up a strong 11.7% to 973,000 b/d. Venezuela also shared in the gains, making a 4.8% increase to 3,531,700 b/d.

Exploration. Drilling remained on a downward trend. Total wells drilled in the world in 1967 were estimated at 41,180, a decrease of 7.5% from the final total in 1966. The United States continued as the single most significant factor, and its total of about 33,525 wells was 9% below the final 1966 level. There was a slight increase in many important countries, except those in northern Africa.

Supply. Proved reserves of crude oil in the world increased approximately 6.3% during 1966, to reach 387,985,000,000 barrels by the end of the year. Most of the oil—some 62.4% of the total in 1966—is in the Middle East. During 1966 the United States raised its volume of known reserves by 0.3% to 31,450,000,000 barrels, or 8.1% of the world total.

Consumption. The worldwide demand for crude oil and liquid hydrocarbons derived from natural gas increased 7% in 1967, to an average of 35,800,000 barrels per day. Consumption rose 9.8% in the booming industrial nations of western Europe and about 8% in the Soviet bloc area. A growth rate of 3.7% in the United States was about the same as it had been for the previous two years. In the Far East, Japan again demonstrated its overall vigorous economy with a substantial 13.2% increase.

There are eight countries whose use of petroleum exceeds one million barrels a day. In descending rank, they are: the United States, USSR, Japan, West Germany, Britain, France, Canada, and Italy. Their consumption makes up about 76% of the world total.

WORLD CRUDE OIL PRODUCTION
(Thousands of barrels daily)

	1964[1]	1965[1]	1966[2]	1967[2]
North America:				
Canada	752.5	813.7	870.9	973.0
Mexico	315.8	323.2	325.7	356.8
United States	7,664.3	7,804.1	8,326.0	8,796.0
Total	8,732.6	8,941.0	9,522.6	10,125.8
South America and West Indies:				
Argentina	274.2	269.2	286.4	305.8
Bolivia	8.7	9.2	15.5	27.0
Brazil	91.0	94.0	111.5	150.0
Chile	37.4	34.8	34.3	34.8
Columbia	171.0	199.1	196.7	195.4
Cuba	0.2	0.7	0.7	0.7
Ecuador	7.6	7.8	9.1	9.3
Peru	63.2	63.2	62.9	63.0
Trinidad and Tobago	135.9	133.9	149.9	171.6
Venezuela	3,393.0	3,472.9	3,369.5	3,531.7
Total	4,182.2	4,284.8	4,236.5	4,489.3
Total, Western Hemisphere	12,914.8	13,225.8	13,759.1	14,615.1
Europe (excluding USSR and other Communist countries:				
Austria	50.7	54.5	52.8	56.4
France	56.0	59.7	58.6	57.0
West Germany	151.4	156.0	155.8	156.9
Italy	49.7	41.2	35.9	29.8
Netherlands	43.0	45.6	44.8	43.4
Spain	0	0	0	1.3
Britain	2.6	1.7	1.8	1.7
Yugoslavia	36.1	41.9	45.5	47.3
Total	389.5	400.6	395.2	393.8
USSR and other Communist countries:				
Albania	14.0	15.6	16.0	16.5
Bulgaria	3.0	4.6	7.0	10.0
Czechoslovakia	3.0	3.5	3.5	3.5
East Germany	2.0	1.6	1.1	1.4
Hungary	37.0	38.0	36.0	35.5
Poland	6.0	6.7	8.0	9.0
Rumania	253.0	255.0	260.0	265.5
USSR	4,460.0	4,830.0	5,275.3	5,606.0
Total	4,778.0[3]	5,155.0[3]	5,606.9[3]	5,947.4
Africa:				
Algeria	522.7	565.1	698.2	798.6
Angola	17.9	13.0	15.0	13.9
Congo Republic	1.7	1.5	...[4]	...[4]
Gabon	20.9	24.9	30.0	68.8
Libya	862.4	1,220.2	1,495.7	1,611.4
Morocco	2.5	2.1	2.2	2.0
Nigeria	120.2	213.7	408.9	437.8
Tunisia	...	...	10.5	28.3
Total	1,578.3	2,040.5	2,660.5	2,960.8
Middle East:				
Abu Dhabi, Trucial Oman	184.3	281.6	360.0	377.1
Bahrain	49.2	56.9	61.7	67.9
Iran	1,690.5	1,885.5	2,112.3	2,574.9
Iraq	1,253.1	1,321.8	1,386.1	1,106.0
Israel	3.9	4.0	3.9	13.9
Kuwait	2,117.0	2,169.6	2,275.5	2,265.0
Neutral Zone	359.1	362.1	418.8	428.3
Qatar	213.6	230.7	288.8	314.1
Saudi Arabia	1,716.1	2,024.9	2,392.8	2,594.3
Turkey	17.6	29.7	36.1	37.0
United Arab Republic	120.0	124.8	121.4	119.1
Total	7,724.4	8,491.6	9,457.4	9,897.6
Far East and Oceania:				
Australia	4.1	7.2	10.0	15.9
Brunei and Sarawak	71.8	79.4	96.8	111.3
Burma	11.4	11.1	12.2	11.5
Communist China	160.0	170.0	190.0	200.0
India	46.4	61.6	93.5	112.8
Indonesia	468.6	488.2	468.5	503.3
Japan	12.5	13.5	15.5	16.0
Pakistan	10.2	10.8	10.0	10.0
Total	785.0	841.8	896.5	980.8
Total, Eastern Hemisphere	15,255.2	16,929.5	19,016.5	20,180.4
World total	28,170.0	30,155.3	32,775.6	34,795.5

[1] Final. [2] Preliminary. (Sources: U. S. Bureau of Mines and "World Petroleum.") [3] Because several sources were used for data on the USSR and its satellites, the figures given for the individual countries may not add to the total shown for the group. [4] Starting with 1966, Congo is included with Gabon.

Transportation. At the middle of 1967, the world fleet of oil tankers of 10,000 deadweight tons (dwt) and larger was 3,015 vessels and 99,558,573 dwt. These figures showed a decrease of eight ships (net change, counting new deliveries and scrappage) and a rise of 2,453,014 dwt, or 2.5% over the level at the end of 1966. Tanker size began to show a giant gain. The average tanker on order at the middle of 1967 was 109,553 dwt, a 31% jump over the average size on order a year earlier. Furthermore, the total number of tankers 100,000 dwt or larger on order again rose steeply, this time to 123. Of these, 75 will be 150,000 dwt or larger; 53 of the ships will range between 200,000 and 216,000 dwt.

Construction of tankers was taking place in a

U. S. CRUDE OIL PRODUCTION BY STATES
(Thousands of barrels)

State	1965[1]	1966	Jan.-Aug. 1967
Alabama	8,064	8,031	4,887
Alaska	11,128	14,359	14,963
Arkansas	25,930	23,600	14,331
California	316,428	344,460	236,775
Colorado	33,511	33,478	22,654
Illinois	63,708	62,220	39,915
Indiana	11,481	11,400	7,090
Kansas	104,733	103,746	66,733
Kentucky	19,386	17,971	10,441
Louisiana	594,853	674,317	506,469
Michigan	14,728	14,272	9,168
Mississippi	56,183	55,130	37,652
Montana	32,778	35,380	22,271
Nebraska	17,216	13,834	8,814
New Mexico	119,166	123,851	83,512
New York	1,632	1,728	1,283
North Dakota	26,350	27,119	16,602
Ohio	12,908	10,735	6,510
Oklahoma	203,441	224,614	154,501
Pennsylvania	4,922	4,449	2,940
Texas	1,000,749	1,073,295	738,781
Utah	25,298	23,711	15,803
West Virginia	3,530	3,674	2,453
Wyoming	138,314	131,077	91,258
Others	2,077	2,548	3,097
U. S. Total[3]	2,848,514	3,038,999[2]	2,118,903

[1] Final figures. [2] Includes Arizona, Florida, Missouri, Nevada, South Dakota, and Tennessee (and Virginia in 1965 and 1966). [3] Includes some field condensate. (Source: U. S. Bureau of Mines.)

number of European yards, in contrast to a year earlier when most of it was being done in Japan. Deliveries of new tankers during 1967 totaled 122 ships and 8.5 million dwt, and deliveries scheduled for the next four years amounted to 22.3 million tons more. Thus, new construction moved up to 31 million tons, compared with 27 million a year earlier.

The world's largest tanker fleet is still that of Liberia, a country which encourages foreign shipping to register under its flag. Liberia now has 561 vessels and 21,504,167 dwt (21.6% of the world total). Norway is second, with 412 ships and 15,720,025 dwt (or 15.8%); and Britain is next, with 393 tankers and 12,809,806 dwt (12.9%). The United States is fourth, with 360 ships and 8,436,679 dwt (8.47%). Japan follows closely with 8,426,832 dwt, or 8.46%, although her fleet totals only 141 ships.

Pipelines. Except for the continuation of the long-distance crude oil line across the USSR, most big current projects were finished by the end of 1967. A considerable number of new natural gas networks were being built in Europe to move Dutch gas to West Germany, Belgium, and France. And more submarine lines were being laid to carry gas from offshore North Sea wells to Britain.

Refining. Total capacity for crude oil distillation in the world rose to 36,956,400 b/d in 1967, an increase of 6.3%. In the non-Communist world, there was a growth rate of 6.7%, to 32,341,800 b/d. Again much of the increase (about 1.5 million b/d) occurred in Europe, Japan, and densely populated Eastern Hemisphere industrial countries.

There are still nine nations in which refining capacity exceeds one million b/d. In descending order they are: the United States, USSR, Japan, Italy, Britain, West Germany, France, Venezuela, and Canada. In the next three years, all but Venezuela and Canada will have risen to 2 million b/d or more.

Hydrogen processing continues to grow as the dominant type of process downstream. Total world capacity is now 6,024,200, a 12% gain over 1966. Catalytic cracking rose very little, about 1.5%, to 5,869,600 b/d. Catalytic reforming showed renewed strength, with a 9.2% gain to 4,367,500 b/d.

In petrochemicals, the number of operating plants rose about 1%, to 1,119. However, a large number of existing facilities were expanded greatly in productive capacity. New projects under way at the end of 1967 will add 167 installations.

Natural Gas. Latest estimates place the world's proved reserves of natural gas at 898.3 trillion cubic feet, of which 289.3 trillion cubic feet are in the United States. Other reserves, in trillions of cubic feet, are Middle East, 219; USSR, 94; Africa, 76, and the Netherlands, 45. (See also GAS.)

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PHILADELPHIA

Philadelphia (mid-1966 est. pop.: city, 2,036,000; metropolitan area, 4,690,000) reelected Mayor James H. J. Tate in a hotly contested election accompanied by controversy within the ruling Democratic party. Racial tensions were much in evidence but produced only local clashes, as the city took extensive precautionary measures designed to prevent major disorders.

Politics and Elections. James Tate won a second 4-year term on November 7 by defeating District Attorney Arlen Specter by a close margin (11,000 votes) in a hard-fought contest. Democratic control of the city was further assured by a 12 to 5 margin in the City Council. Specter remained in office as district attorney; a legal challenge to his holding office while campaigning was defeated in a Pennsylvania Supreme Court decision.

In the May primary elections, Tate had easily defeated former City Controller Alexander Hemphill on the Democratic ballot in spite of support for the latter from Democratic City Committee chairman Frances R. Smith and part of the regular Democratic organization. Differences between Tate and Smith emerged at this time in a publicly waged dispute. Smith, after barely escaping dismissal in a September vote of Democratic ward leaders, was replaced in December by U. S. Congressman William J. Green, son of a former city Democratic chairman.

Human Relations and Civil Rights. There were a number of local racial incidents in public schools and elsewhere, but no major disturbances. However, Mayor Tate on July 27 proclaimed a state of limited emergency in order to forestall violence. The accompanying ban on gatherings in public of 12 or more persons, in effect for 19 days, was challenged by the local American Civil Liberties Union and by a group of 23 demonstrators who were arrested while testing the proclamation's legality. In October the police reported the arrest during the preceding summer of 35 leaders of the Revolutionary Action Movement (RAM), an extremist underground organization of Negroes. Police also reported finding weapons, inflammatory literature, and plans for the murder of public officials.

The Girard College controversy was the subject on July 5 of an order of the U. S. District Court directing the admission of seven Negro boys to the all-white school. The order was based on the court's 1966 decision. The school, founded in 1848 for "poor, white male orphans," according to the will of Stephen Girard, appealed the order. The 1966 ruling held that denial of admission to Negroes violates the 14th Amendment.

A fair-housing law passed by the City Council in August amended the 1963 law to forbid discrimination in housing sales and rentals in 90% of the city's housing, compared with 35% earlier.

UPI

PHILADELPHIA'S MAYOR, James H. J. Tate, raises hands with his wife after winning reelection in a close and sometimes bitter contest that included fighting within his own ruling Democratic party.

Finances. Mayor Tate's proposed 18-month budget, a transitional measure to make the city and federal budgets coterminous thereafter, was defeated in a court ruling which held it a violation of the city charter. It was replaced by a 12-month budget for $406.4 million, which called for no tax increases. Bond issues of $51.2 million were approved in the November elections.

Employment. As of September, unemployment in the Philadelphia metropolitan area totaled 57,400, or 2.9% of the total work force, a ratio identical to that of September 1966.

Labor Dispute. Philadelphia was hit by its second major transit strike in four years on January 15, when 5,000 transit workers walked off their jobs. The dispute was settled the next day, with the striking union gaining wage and benefit increases.

Education. Fall public school enrollments were 288,768 for the city, an increase of 8,966 in one year. In September, Mark R. Shedd became superintendent of schools.

Anti-Poverty Program. The city's third anti-poverty election brought out 17,500 voters to choose 12 Community Action Councils, a voting figure well below the 30,000 figure for 1966. Difficulties arose from differences between the central and neighborhood organizations, and actual and threatened cutbacks in federal anti-poverty funds.

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PHILANTHROPY

Government programs in fields traditionally supported by private donations continued to expand in 1967, leading to what will probably be significant changes in the direction and scope of private philanthropy. In the fiscal year ending in 1966 government spending on social welfare totaled $87.6 billion, an increase of $10.1 billion from the previous year. Of direct consequence for the philanthropic support of hospitals was the launching of the federal Medicare program. On July 1, 1966, more than 19 million persons over 65 became eligible for hospitalization under its provisions. Government payments to hospitals and physicians in the first six months of Medicare totaled $1.1 billion.

Private giving continues to grow vigorously, and in 1967 total private donations well may have exceeded $15 billion. Current data are not presently available, but indicative of the recent trend is the rise in corporation grants from $657 million in 1963 to $729 million in 1964. Contributions reported as deductions on individual income tax returns also reflect the increase, rising from $7.5 billion in 1962 to $8.3 billion in 1964.

Reports from the recipients of philanthropic gifts also attest to the growth in giving. Some 2,200 U. S. and Canadian community chests and united funds raised an estimated $670 million in 1967, up from $626 million in 1966. Independent private secondary schools received $75.4 million in gifts in 1965–66, an increase of $3.3 million over 1964–65. Gifts and bequests to community trusts and foundations totaled $41.8 million in 1964, up from $27.6 million in 1963. The National Council of Churches reported 1965 receipts of $3.2 billion for 44 Protestant denominations, up about $200 million from the previous year.

The third edition of *The Foundation Directory*, published in mid-1967 by Russell Sage Foundation, lists 6,803 medium and large foundations making annual grants totaling $1.2 billion. In the mid-1960's foundation spending was growing at a rate of 16% a year. Tabulations covering $649 million in 1965 grants described the following pattern of foundation support: education, 25%; international activities, 20%; health, 16%; welfare, 16%; sciences, 9%; religion, 8%; and humanities and the arts, 6%.

Early in 1967, McGeorge Bundy, president of the Ford Foundation, reported that this foundation had been making philanthropic outlays at the rate of $300 million a year, or twice its annual income. To preserve its ability to deal with future problems, its trustees decided to reduce spending to levels more in line with income. One area chosen for reduction was its special program of capital grants to colleges and universities, on which the Ford foundation had been spending $55 million a year. Bundy noted that there may be room for great improvement in the management of the $12 billion held in endowment funds by colleges. He pointed out that if the return on this capital could be improved by one percentage point, the increased return of $120 million a year would be more than twice the amount the colleges had been receiving from the Ford Foundation.

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PHILATELY. See STAMP COLLECTING.

PHILIPPINES

The second year in office of President Ferdinand E. Marcos was marked by political activity leading up to the November 1967 elections, in which voters cast their ballots for 8 senators, 65 provincial governors, and 14,000 mayors and local officials. The president and his Nationalist party won an overwhelming victory, capturing 6 of the 8 contested Senate seats. An important result of the elections was that Marcos no longer must face a hostile bipartisan majority in the Senate.

Elections. The November 14 elections demonstrated public support for President Marcos and his "rice, roads, and schools" program. His Nationalist party won 6 of the 8 seats up for election, giving him increased control of both the Senate and House of Representatives. Besides the election of senators and provincial, city, and town officials, a plebiscite was held on two proposed amendments. The first increased the maximum number of congressional districts from 120 to 180, and the second permitted members of Congress to sit in the constitutional convention that will meet in 1971. Both were rejected.

Congress. The regular session of Congress opened in January with a new majority of Nationalist and Liberal senators. This alignment of forces enabled the Liberals to control the legislative machinery in the Senate until after the November elections. Gil Puyat (a Nationalist) was elected Senate president, and in the House of Representatives Jose B. Laurel (a Nationalist) was elected speaker by the combined votes of the Nationalists and some Liberals.

In its regular and special sessions, Congress enacted into law many of the proposals submitted by President Marcos. In addition to the budget of 2.2 billion pesos (3.9 pesos = U. S. $1), Congress approved bills for 3.5 billion pesos for public works over a 4-year period, incentives to foreign and local investors, a government printing plant, and creation of a Philippine coast guard.

Law and Order. A number of incidents caused the government to intensify its drive against crime in 1967. The most shocking was the February 20 murder of James Gordon, the American-born mayor of

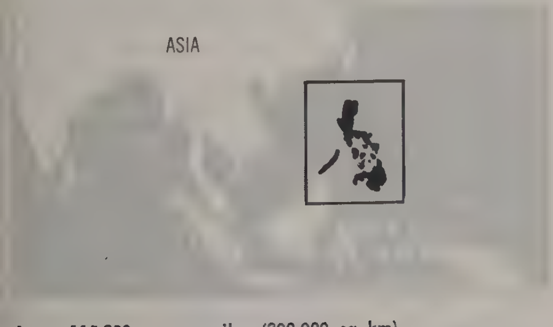
WIDE WORLD

PRESIDENT Ferdinand Marcos (*left*) of the Philippines inspects a group of Philippine soldiers who are stationed in South Vietnam during his visit to that country in July.

FERDINAND EDRALIN MARCOS, president of the Philippines, who in October 1966 served as host and chairman of the Manila conference of nations allied with South Vietnam, continued in 1967 to support U. S. military involvement in the Vietnamese conflict. He interpreted the victory of his Nationalist party in the Senatorial and local elections of Nov. 14, 1967, as a mandate giving him a free hand to carry on his plans for reform.

Marcos was born in Sarrat, Ilocos Norte province, northern Luzon, on Sept. 11, 1917. After attending the University of Manila, he distinguished himself as an intelligence officer and guerrilla leader against the Japanese in World War II. In 1949 he entered the Philippine House of Representatives. He became a senator in 1959. Defeating incumbent president Diosdado Macapagal at the polls, Marcos was inaugurated as president on Dec. 30, 1965.

PHILIPPINES • Information Highlights



Area: 115,830 square miles (300,000 sq km).
Population: 34,656,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Quezon City, the capital, 482,400; Manila, 1,356,000; Cebu, 299,700; Davao, 269,300.
Government: *President*—Ferdinand Edralin Marcos (took office Dec. 30, 1965); *Vice President*—Fernando López. Congress—House of Representatives, 104 members (party seating, 1967: Liberals, 60; Nationalists, 40; vacant, 4); Senate, 24 members (party seating, 1967: Nationalists, 15; Liberals, 7; others, 2).
Religious Faiths: Roman Catholics, 86% of population; others, 14%.
Education: *Literacy rate* (1960), 71.9% of population aged 15 and over. *Total school enrollment* (1963)—6,529,051 (primary, 5,233,611; secondary, 823,065; technical, 112,911; higher, 359,465).
Finance (1967 est.): *Revenues,* $583,156,000; *expenditures,* $597,412,000; *public debt,* $1,039,368,700; *monetary unit,* peso (3.9 pesos equal U. S.$1).
Gross National Product (1966): $5,727,976,000.
National Income (1966): $4,758,784,000; average annual income per person, $142.
Economic Indexes (1965): *Manufacturing production,* 149 (1958=100); *agricultural production,* 133 (1956–57=100); *cost of living* (1966), 138 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,612,800; sugar, 1,600,000; gasoline (1965), 1,115,000; wheat flour, 351,600.
Crops (metric tons, 1966–67 crop year): Abaca fibers, 95,000; (ranks 1st among world producers); rice, 4,148,000.
Minerals (metric tons, 1965): Iron ore, 1,438,000; chromite, 554,000; salt, 225,000; pyrite, 105,293; coal, 92,000.
Foreign Trade (1966): *Exports,* $838,000,000 (chief exports: coconut products, $280,000,000; wood, $208,400.000; sugar, $115,900,000; hemp, $18,700,000); *imports,* $957,400,000 (chief imports, 1965: nonelectrical machinery, $131,170,000; cereals and preparations, $98,590,000; transport equipment, $79,570,000). *Chief trading partners* (1965): U. S. (took 48% of exports, supplied 35% of imports); Japan (took 26% of exports, supplied 24% of imports).
Transportation: *Roads* (1964), 34,308 miles (52.212 km); *motor vehicles* (1965), 273.203 (automobiles, 150.345); *railways* (1965), 638 miles (1.026 km); *merchant vessels* (1966), 106 (603,000 gross registered tons).
Communications: *Telephones* (1966): 164,850; *television stations* (1967), 14; *television sets* (1967), 190,000; *radios* (1964), 1,225,000; *newspapers* (1964), 18.

Olangapo, by a teen-ager. The youth allegedly was paid to shoot the mayor because he refused to heed the demands of the city's gangsters. Olangapo is near the U. S. naval base at Subic Bay.

President Marcos created a striking force called the Metropolitan Command (Metrocom) to cooperate with and aid local police in maintaining law and order. On its part Congress approved measures establishing criminal circuit courts, uniform and summary procedures in the investigation of criminal cases, and additional prosecutors for the Department of Justice.

Economy. Impressive gains were made in certain sectors of the economy in 1967. Rice production increased with the planting of high-yield rice varieties, such as IR-8, called "miracle rice." The new strain was developed by the International Rice Research Institute near Manila. Among the important public works projects completed during the year were the Manila North Diversion Road, the Manila South Road, and the Angat multipurpose irrigation dam. The dam will make possible year-round irrigation of additional rice lands, which, it has been estimated, should succeed in increasing rice crops by millions of tons.

Foreign Affairs. The Philippines continued to pursue its policy of good relations with the United States and of furthering cooperation among the nations of Asia. On May 18 a Philippine–U. S. agreement was signed, setting aside about $13 million of the $28 million war damage fund for the construction of school buildings.

In Bangkok on August 8, the Association of Southeast Asian Nations (ASEAN) was created to promote active collaboration and mutual assistance among the member nations—Malaysia, the Philippines, Singapore, and Thailand. Their hope is eventually to establish a Southeast Asian common market.

President Marcos made a surprise visit to the 2,000-man Philippine force in South Vietnam on July 16. The force, the Philippine Civic Action Group, established and is running a resettlement camp for refugees and defectors to South Vietnam.

Further steps toward reducing regular and technical smuggling were made. The president asserted that cigarette smuggling had been cut by 60%, and on September 1 the Philippines and Malaysia signed an agreement providing for full cooperation on Malaysia's part to curb smuggling between the two countries.

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PHILOSOPHY

One of the most important events of 1967 was the appearance of the eagerly awaited *Encyclopedia of Philosophy*. This is the most comprehensive philosophical encyclopedia ever published in the English language. Five hundred distinguished scholars from all over the world contributed to the encyclopedia, which was edited by Paul Edwards. The 8-volume work took 6½ years to produce and is now widely considered to be the most important source book in the field of philosophy.

Numerous other works in a variety of areas in philosophy were published during the year. There was also a proliferation of philosophical journals, with four new periodicals founded in 1967. There were *Nous; The Journal of Value Inquiry; The Philosophical Index;* and *Philosophy and Rhetoric.*

Existential Philosophy and Phenomenology. In the field of existential philosophy and phenomenology, Frederick A. Olafson published *Principles and Persons; An Ethical Interpretation of Existentialism;* George A. Schrader edited *The Existentialist Philosophers;* and Edward N. Lee and Maurice Mandelbaum edited *Phenomenology and Existentialism.* Albert Rabil, Thomas Langan, and John F. Bannan each brought out a book testifying to the wide-ranging influence of the important French phenomenologist Maurice Merleau-Ponty. Marvin Farber, who is generally credited with bringing phenomenology to the United States, published two new books on the subject, *The Aims of Phenomenology* (1966) and *Phenomenology and Existence* (1967). These books represent an attempt to reinterpret phenomenology in objective, scientific, and naturalistic terms.

Naturalistic Philosophy. Naturalistic philosophy was strongly represented in several works in 1967. John P. Anton edited *Naturalism and Historical Understanding; Essays in the Philosophy of John H. Randall, Jr.;* William Edwards edited *The Metaphysics of Naturalism* by Sterling Lamprecht; and Paul Kurtz edited *Pragmatic Naturalism; Essays in Honor of Sidney Hook.*

Traditional Philosophy. A surprising amount of attention was given to traditional philosophical problems. Abraham A. Edel and J. M. E. Moravcsik each published books entitled *Aristotle.* The periodical *The Monist* devoted two issues to Immanuel Kant (July and October, 1967); Arnulf Zweig published *Kant: Philosophical Correspondence (1759–99);* Jonathan Bennett produced *Kant's Analytic,* a critical exposition of Kant's major work, the *Critique of Pure Reason;* and Moltke S. Gram edited a book of essays on Kant's philosophy entitled *Kant: Disputed Questions.*

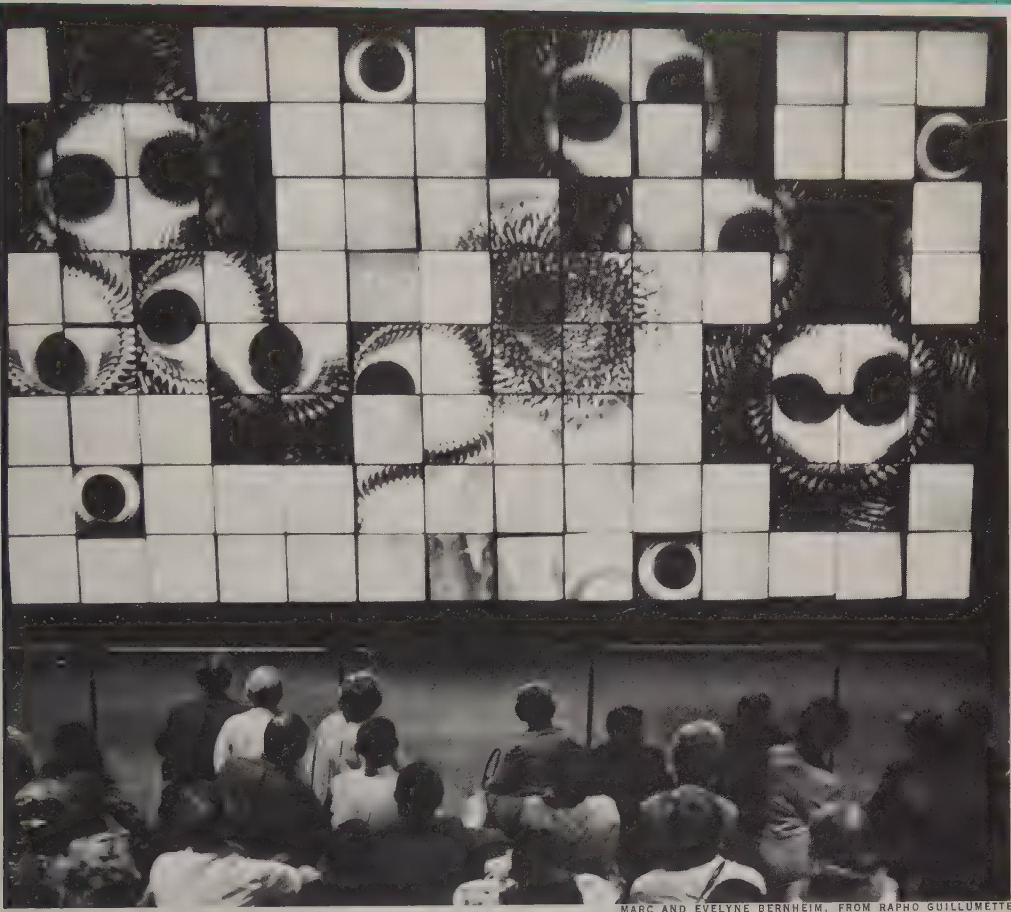
Linguistic Philosophy. Ludwig Wittgenstein and linguistic philosophy continue to command great and widespread attention. Among the works that appeared in 1967 are *Essays on Wittgenstein's 'Tractatus'*, edited by Irving M. Copi and Robert W. Beard; *Wittgenstein and the Problem of Other Minds,* edited by Harold Morick; and *The Linguistic Turn; Recent Essays in Philosophical Method,* edited by Richard Rorty. In addition, *The Journal of Philosophy* devoted a special double issue (February 1967) to the subject in "Some Recent Issues in Linguistics." It is noteworthy that such a distinguished philosophical journal turned heavily toward analytic philosophy.

Conferences. Many important and innovative conferences were held during the year. One of the most interesting was "The International Philosophy Year," 1967–68, which convened at the State University of New York (Brockport). There, with the support of UNESCO, some 64 outstanding philosophers of the world were scheduled to meet in 14 conferences devoted to a study and analysis of "The Uses of Philosophy."

The Council for Philosophical Studies held a summer institute in 1967 at Stanford University, California. The conference was devoted to the theme "Philosophy of Science." In December 1966 the Society for the Philosophical Study of Dialectical Materialism discussed Marxism and existentialism at the eastern meeting of the American Philosophical Association.

PAUL KURTZ
State University of New York at Buffalo

PHOTOGRAPHY



MARC AND EVELYNE BERNHEIM, FROM RAPHO GUILLUMETTE

PHOTOGRAPHIC WALL made up of cubic screens was featured at the Czechoslovakian pavilion at Expo 67. Thousands of slides were shown in programmed sequence.

PHOTOGRAPHY

The expressive power of photography was well exemplified at Expo 67 in Montreal, where 80% of the presentations and pavilions used photography in some form. Among those cited as outstanding were the "Labyrinth," German, Canadian, and Czechoslovakian pavilions. The spectacles at the last-named pavilion included a narrative motion picture, the outcome of which was determined by audience vote at each showing, and a presentation using hundreds of programmed slide projectors and a wall filled with cubic screen elements. Meanwhile the continued trend toward use of color by amateurs was observed; an estimated 60% of the more than 3 billion still pictures taken by amateurs in the United States in 1967 were in color.

APPLICATIONS OF PHOTOGRAPHY

Education. The super 8 motion picture format is becoming an important format for educational films, the domain of 16-mm films since the 1930's. The advantages of super 8 include simplicity of equipment, ease of adding sound, and lower costs. Many of the highly-automated cameras developed for amateur use serve well for making instructional films and for recordings experiments and projects. The Kodak Ektagraphic 8 camera is a version of an amateur camera modified for this purpose. Its fast zoom lens, reflex viewing, and ability to use film of high sensitivity suit it to the tasks of making teaching films or recording school athletic events.

The DuKane Super 8 Sound Projector is equipped to present films having either magnetic or optical sound tracks. The Kodak Ektagraphic 8 Projector shows films on conventional reels or in special cassettes. The cassettes are designed to simplify threading so that even very young students can operate them. They can hold "single-concept" films that run from a few seconds to a few minutes—one of the newer ideas in individual instruction.

The economical mass duplication of professionally made teaching films is the goal of a new super 8 duplicating system announced by Kodak scientists. A special 35-mm color stock has space for four parallel strips of super 8 pictures with magnetic tracks. A high-speed printer generates enough super 8 sound prints on this stock in three minutes for two hours of viewing time. Up until the final slitting to 8-mm width, all operations are economically handled on

35-mm processing equipment. Another new facility is the reduction printing of 16-mm to super 8 size, as announced by Calvin Laboratories.

The making of lecture slides will be simplified by the Kodak Ektagraphic Visualmaker. This camera and its accessories reduce the uncertainties in copying text and pictures and in photographing small objects. Good-quality slides are produced at costs equal to those of amateur snapshots.

Oceanography. In addition to the growing amateur interest in underwater photography at shallow depths, there is much scientific interest in the unknown depths of the sea. The Scripps Institute of Oceanography at La Jolla, Calif., is relying strongly on photography to survey these depths for mineral resources and animal life. The institute has built a 60-foot (18-meter) device, with camera, lights, and a radio beacon, to probe down to 22,000 feet (6,700 meters). The device is baited to attract fish, and takes a picture every 10 minutes on 35-mm color and black-and-white films as it moves along.

Publishing. The year 1967 marked the first anniversary of an unusual event in the publishing field. Increased interest in the legal aspects of medical practice called for something not provided by existing medical or legal journals. Estimates showed that a journal to serve this need would have to run 700 to 800 pages an issue, but that only a relatively few copies would be needed. The economics of this were forbidding. Therefore the Milton Helpern Library of Legal Medicine, deciding to use photography to reduce costs, brought out the *International Microfilm Journal of Legal Medicine* exclusively on microfilm. Subscribers may choose among three formats at very low subscription rates: 16-mm or 35-mm rolls, or 4-by-6-inch (10-by-15-cm) microfiche (transparent cards that carry several dozen page images on each card).

Copying. A new electrostatic office copier, the Graphic/Minolta Series 200 Copying Machine, is another entry in the very active field of completely automated copying. Up to 24 copies of a document are produced at a rate of about one every 8 seconds on a coated, photosensitive paper.

CAMERAS AND ACCESSORIES

New still cameras for amateurs now automatically perform nearly every function that formerly required judgment or manual adjustment. Nearly all the new motion picture equipment in the United States is in the super 8 format.

Still Cameras. The Revere Automatic 1054E Camera has an electric motor that automatically positions the first frame when a 126-size cartridge is dropped in. It also winds off the trailer after the last picture. The Yashica Electro 35 Camera uses 35-mm film and has a fast f/1.7 Yashinon-DX lens. A 5.6-volt mercury battery powers its Copal electric shutter. Small indicator lamps warn of overexposure and indicate the correction required. Another lamp visible in the viewfinder reminds the photographer to brace the camera when a slow shutter speed is employed. A new twin-lens reflex camera, the Yashica 24, uses both 120- and 220-size roll films. It has a built-in cadmium sulfide (CdS) exposure meter and accepts auxiliary lenses to increase by 50% or to decrease by 25% the effective focal length of the prime lenses.

Through-the-lens exposure metering is becoming the rule in 35-mm single-lens reflex cameras (SLR's). Camera designers have shown great ingenuity in the arrangement of the sensitive element to get the most reliable light measurement for exposure determination. Recent models, such as the Minolta SR-T 101, Nikon Photomic TN, and Nikkormat FTN cameras, are more strongly influenced by light from the central part of the subject than from surrounding areas. This "center-weighting" is said to result in a higher proportion of correctly exposed pictures, particularly of back-lighted scenes.

The Leica M-4, a precision 35-mm rangefinder camera, introduces simplified loading and easier rewinding. Its viewfinder shows the field of the four most commonly used lenses. Among the new larger-format cameras are the Mamiya Super 23, a 2¼-by-3¼-inch nonbellows press camera with coupled rangefinder; the Plaubel Profia 4-by-5-inch monorail camera, having extreme flexibility in its adjustments; and the Calumet CC-402 Wide-Field Camera, a similar monorail camera with a special bellows to allow free movements with wide-angle lenses.

The Bowens Illumitran color slide duplicator makes copies of transparencies up to 4 by 5 inches in any of several formats. The illuminator has a controllable electronic flash unit, an exposure meter, a filter compartment, and provision for introducing special effects such as texture screens.

Lenses. Several special lenses for 35-mm single-lens reflex (SLR) cameras were introduced in 1967. Spiratone announced an inexpensive mirror lens of 500-mm (20-inch) effective focal length (f/8) that is only 8 inches (20 cm) long. It is a catadioptric system (combining lenses and mirrors) that focuses from 10 feet (3 meters) to infinity. Another lens, the Samigon Auxiliary Fish-Eye, approaches a hemispherical field of view; it fits over the normal camera lens and can be used on cameras other than 35-mm. Its relatively low price should make extreme wide-angle photography available to many.

Two new zoom lenses, the Auto Tamron (f/3.8, 80- to 250-mm) and the Soligor Automatic (f/4.5, 90- to 230-mm), are available in mounts to fit most popular 35-mm SLR's. Their effective focal lengths span the range most often needed in longer-than-normal lenses for 35-mm photography.

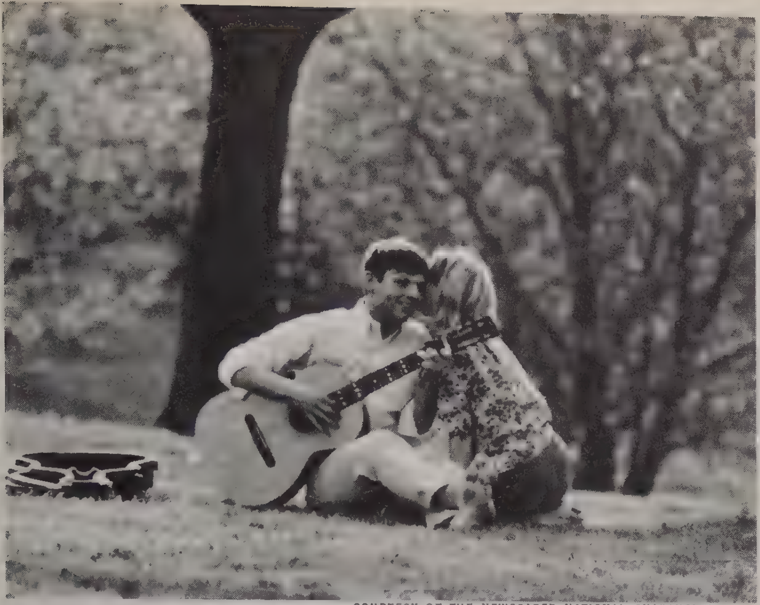
The Ina Telephoto Lens (f/1.5), of 135-mm effective focal length and claimed to be the fastest such lens for 35-mm cameras, is two to three stops faster than most other 135-mm lenses.

The Nikon Prism Reflex Sportsfinder, an unusual accessory for the Nikon F Camera, shows the entire field of the camera even at a distance of 2½ inches (6 cm) from the eye. This permits use of the camera in underwater housings and while the photographer is wearing goggles.

Exposure Meters. Several interesting exposure meters appeared in 1967. The Spiratone Expotrol Meter uses a CdS cell that may be fitted with any of several accessories to vary its angle of acceptance from 3° to 40°, to read incident or reflected light, or to adapt it to read through a microscope or the ground glass of a view camera. Both the Bowens Flashmeter and the Elinchrom Exposure Meter for electronic flash exposure measurement are calibrated to read directly in aperture numbers. The Ikophot T exposure meter is an all-electronic instrument that has no delicate pivoted-coil meter movement. A dial on the instrument is adjusted until indicator lights signal that the proper setting is reached. Great sensitivity is provided by a CdS cell.

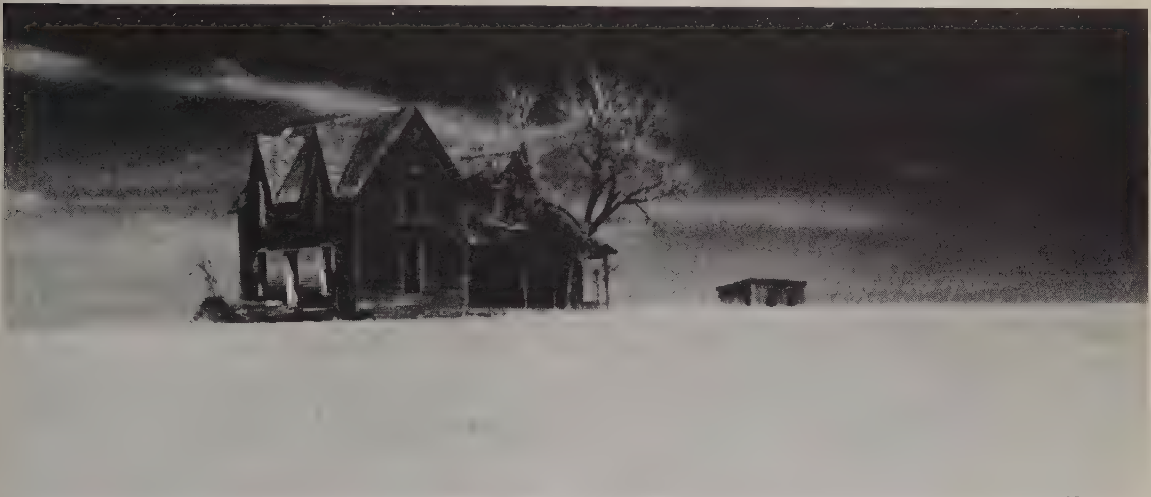
Motion Picture Cameras. Typical of the sophisticated cameras that appeared in 1967 is the Minolta Autopak Super 8, with its variable-speed, power

1967 NEWSPAPER NATIONAL SNAPSHOT AWARD WINNERS



LOVERS in a park, photographed by university student Thomas Riddell, 19, catches a mood of gentleness and youthful expectation.

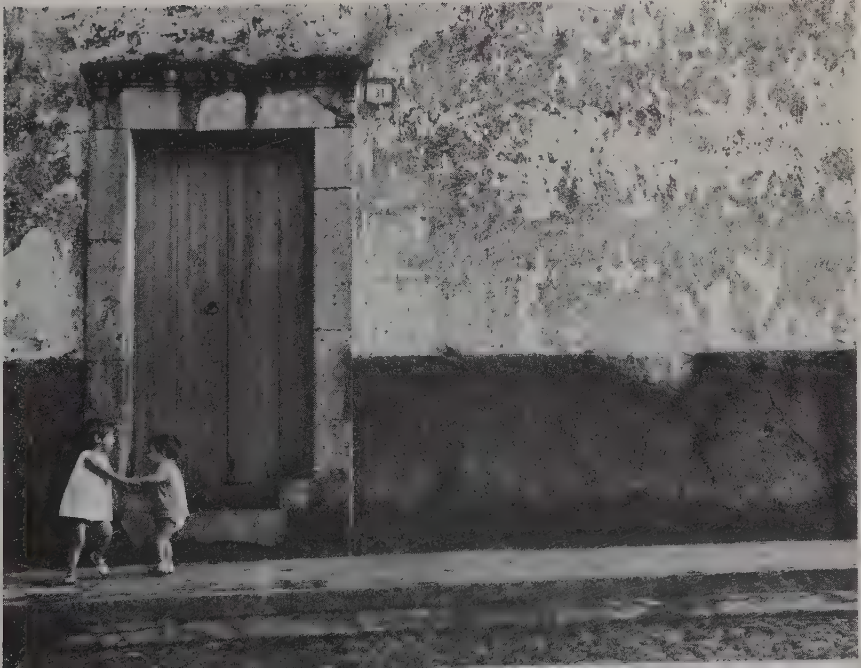
COURTESY OF THE NEWSPAPER NATIONAL SNAPSHOT AWARDS



ABANDONED farmhouse in Oklahoma was given the quality of an artfully composed painting by 21-year-old photographer Bill Adams.

COURTESY OF THE NEWSPAPER NATIONAL SNAPSHOT AWARDS

COURTESY OF THE NEWSPAPER NATIONAL SNAPSHOT AWARDS



CHILDREN dancing in a Mexican street enliven Geoffry Gove's precise photographic study of right angles and eroded surfaces.

zoom lens (Rokkor f/1.8, 8.4- to 50-cm); its through-the-lens exposure control system; its variable frame rate; and its reflex finder. In addition, 16-mm equipment continues to be made for the serious amateur and the professional. The Canon Scoopic 16 Movie Camera is handheld and has an integral zoom lens. An unusual layout of the film path permits most of the bulk and length of the lens to be contained in the camera body, giving the camera good balance in the hand for steady pictures. It also has automatic exposure control, reflex viewing, self-threading, and electric drive.

OTHER PHOTOGRAPHIC EQUIPMENT

Films and darkroom equipment introduced in 1967 offered wider possibilities to both the professional and the amateur photographer.

Films. General Aniline and Film Corporation announced a new high-speed color reversal film, Ansocochrome C-500. The film's exposure index of 500 can be doubled by lengthening the first development step in processing. Kodak 2485 High Speed Recording Film (Estar-AH Base) has an exposure index of 8,000 when developed in a rapid, high-temperature process. It should prove useful for spectral analysis, astronomy, and the recording of weak signals of short duration.

A family of new Agfa Isopan Films with exposure indices between 25 and 400 are hardened in manufacture to permit processing at temperatures up to 90° F (32 C). New Agfa-Gevaert Scientia films and plates for holography have special silver halide emulsions with peak sensitivities adjusted to coincide with the radiation emitted by ruby, helium-neon, and argon lasers. (Holograms are photographic records formed by laser light without lenses.) The films and plates are claimed to make fractional-second pictorial holograms possible.

The new Polaroid Type 51 Land Film is an extremely high contrast film for graphic arts use or for unusual pictorial effects. Luminos Photo Corporation introduced a cloth-base reversal color print material, Color-Linen. After conventional color processing, the material may be sewn or washed.

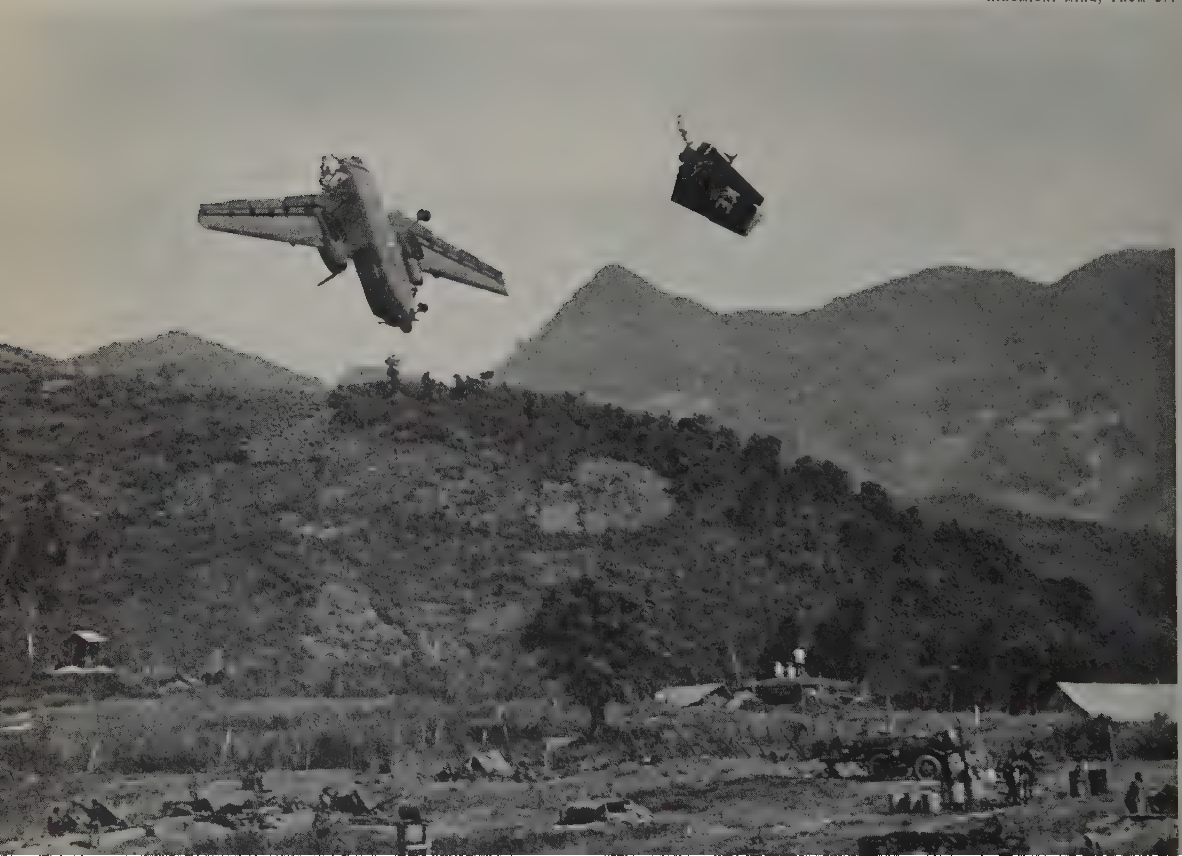
Film Splicer. Since the new polyester-base motion picture films cannot be spliced with film cements used for acetate-base films, transparent tape splices have been employed. However, they interfere with the sound reproduction of magnetic striped films. Eumig has introduced the Chemo Splicer that produces a strong serrated bond in polyester films without the use of tape.

Developing. Kodak introduced the E-4 process for Ektachrome films—suitable for both amateurs and large processing laboratories—that shortens processing times considerably. A Japanese firm announced the Teicon Photopet Daylight Color Slide Kit, which is designed to process incorporated-coupler reversal color films in their original camera cassettes without the need for a darkroom. General Aniline and Film Corporation, using an unusual solution applicator head design, has produced the Transflo Processors for rapid-access processing of black-and-white films and papers. Agitation is achieved by rapid movement of the processing solutions.

Printing. 3M Company has introduced a new

U. S. TRANSPORT PLANE falling to earth after being mistakenly hit by American artillery in South Vietnam, snapped just before crash by photographer Hiromichi Mine.

HIROMICHI MINE, FROM UPI



"333" Dry Silver Printer System that produces 18-by-24-inch (46-by-61-cm) enlarged prints in 16 seconds from microfilm negatives on Type 771 paper, a special light-sensitive paper processed by the application of heat alone. The images are essentially stable to further light exposure. Type 777 paper, having higher speed, was introduced for photographing cathode ray tubes in computer applications.

The Photomate Printer, by Graphic Products, Inc., enables children to make prints up to 5 by 7 inches (12.7 by 17.8 cm) from small negatives without the use of solutions and under room illumination.

The Heath Colorval color printing meter, priced for the serious amateur photographer, is an electronic color densitometer in kit form for determining color balance and exposure in color printing.

A number of manufacturers have announced new or improved black-and-white enlarging papers. Du Pont Varilour Paper is controllable in contrast by varying the color of the exposing light with filters. Wide development and exposure latitudes and variable image tone, from brown-black to blue-black, are claimed. Gevagam Variable Contrast Paper, made by Agfa-Gevaert, also uses filters to control contrast. A range corresponding to paper grades 1 through 6 is said to be achieved. Ilfobrom Enlarging Papers were announced by Ilford in six grades (0 to 5); they claim equal grade spacing and identical image tone. Matched effective printing speeds enable the user to change from grade to grade without difficult exposure recalculation.

The new Durst M-600 Enlarger applies an unusual principle for critical focusing. A special target is shifted into place and the lens is adjusted until blending of the colored image is achieved. The enlarger, taking negatives up to 2¼ inches square, is designed for color and black-and-white. The entire device is disassembled easily for storage.

Slide Projection. Automatic focus correction appeared on a number of projectors in 1967, including those in the Miranda, Airequipt, Kodak, Sawyers, Nikkormat, and Braun lines.

The Pro-gramo Tape Cartridge Sound System is available in modifications to mate with several popular lines of slide projectors in order to provide synchronized slide-tape presentations. The inaudible signals that operate the slide-changing mechanism are recorded on the tape in a parallel track.

The new Sylvania Luminac Lamp, first incorporated in the Airequipt 450 EF (electronic focus) slide projector, operates on the halogen cycle principle. This 500-watt lamp has an internal reflector for more even illumination. The Radiant Uni-Vision Rear Projection Unit, a device about the size of a large portable phonograph, unfolds to reveal a 16-inch (40-cm) square, plastic, rear-projection screen and an automatic slide projector. It can be used to show slides under moderate illumination. The Kodak Projection Sunscreen has a concave shape; the reflective properties of the metallic surface give it about tenfold greater brightness than conventional screens. Its design also rejects stray light that otherwise would degrade color brilliance and saturation. It can present a good picture even in a fully lighted room.

PHOTOGRAPHIC SCIENCE

The Society of Photographic Scientists and Engineers (SPSE) held its second symposium on unconventional photographic systems in the fall of 1967. Among topics discussed were deformable films, electrophotography, photochromic systems, nonhalide silver systems, and photopolymer imaging systems.

Non-Halide Silver Systems. The Itek RS Process is an example of the increasing economic importance of nonsilver systems. It is based on the photosensitivity of certain metal oxides and other compounds. A film or paper support coated with one of these photoconductors is exposed to form an image that is then subjected to a rapid, 3-step wet process. The developed images have very high resolution—as much as 600 lines/mm for RS films. Different photoconductors perform best in various regions of the spectrum: tin oxide in the ultraviolet, cadmium sulfide in the visible, and lead oxide in the X-ray regions.

Itek announced a commercial application of the process in making enlarged paper prints from microfilm negatives of engineering drawings, using the Itek "18-24" Reader Printer.

Lens Evaluation. Professor Hiroshi Kubota at the University of Tokyo has developed a device to help lens designers evaluate the practical effects of varying amounts of aberrations in a lens that is to be designed for a specific task. His Canon Aberration Synthesizer, in focal lengths of 45- and 100-mm, has 10 elements in five groups that allow the researcher to have independent control of astigmatism, coma, and spherical aberration.

Holography. G. A. Massey of Sylvania Electronic Systems, California, has devised a technique for acoustical holography. An object is "illuminated" with a beam of ultrasonic energy, the reflected component of which is detected by a scanning microphone. The electrical signal from the microphone is compared with another signal derived from the ultrasonic source.

The resultant signal is used to modulate the intensity of a lamp mounted to move with the scanning microphone. A conventional camera records the varying light traces, and the developed negative may be viewed as a holographic image of the original object, using red laser light. There are possible applications as a method for nondestructive materials testing.

Literature. The Focal Press brought out *Photographic Processing Chemistry* by L. F. A. Mason, a valuable reference for photographic scientists; *Color Photography in Practice*, L. A. Mannheim's thorough revision of D. A. Spencer's long-respected book; and *View Camera Techniques* by Leslie Stroebel, an excellently illustrated practical work for professional and advanced amateur photographers.

Photo Technology by Marshall LaCour and Irvin T. Lathrop (American Technical Society) presents in simple form the science of photography for the questioning amateur. *Principles of Color Reproduction Applied to Photomechanical Reproduction, Color Photography, and the Ink, Paper, and Related Industries* by J. A. C. Yule (Wiley and Sons) is a thorough and penetrating treatment certain to be regarded as the definitive work in its field.

Photography in the Twentieth Century by Nathan Lyons (Horizon Press and George Eastman House of Photography) presents a selection of pictures from the print collection of George Eastman House. *Earth Photographs from Gemini III, IV, and V* (NASA) is a collection of 250 strikingly beautiful color photographs of the earth made from space.

MARTIN L. SCOTT
Eastman Kodak Company

PHYSICS

The year 1967 was an interesting although relatively quiet one for the world of physics, with elementary particle physics getting most of the headlines. The new 2-mile Stanford linear accelerator (SLAC) moved closer to full operation, and plans went ahead for the Atomic Energy Commission's proposed 200-billion-volt accelerator.

Relativity specialists used new experimental information about the shape of the sun to cast doubt on Einstein's theory of general relativity. Other physicists employed cosmic rays and spark chambers to explore Egyptian pyramids. The heaviest atom yet known was produced. But, as always, most physicists were busy consolidating advances in a detailed, step-by-step fashion.

Particle Physics. The study of elementary particles continues to be one of the most exciting and rapidly changing areas of physics. One of the basic rules of physics during the past decade has been the CPT (the product of *charge conjugation, parity, and time reversal*) conservation theorem. The CPT theorem states that, given the validity of the theory of relativity, the laws governing antimatter are the same as those governing matter, except that antimatter must be viewed as if in a mirror, and timed with a clock that runs backward. Charge conjugation relates matter and antimatter and involves changing the signs of electric charge and magnetic moment. Parity relates a reaction to its mirror image; that is, the parity rule asserts that a particle has no intrinsic right- or left-handedness. Time reversal invariance refers to the principle that the direction of the flow of time should have no effect on the validity of physical laws. It is one of the symmetry laws which physicists are most reluctant to abandon.

Originally, it was believed that *C*, *P*, and *T* are all conserved. In 1957 parity and charge conjugation were found to be violated in the weak interactions. Since *C* and *P* are not conserved, scientists wondered if the product *CP* was conserved. If *CP* is not conserved and *CPT* is (conservation of *CPT* is still generally assumed to be true because it is a consequence of the theory of relativity), then *T* is not conserved.

In 1964 a group of experimentalists from Princeton University discovered that *CP* conservation was not valid for weak interactions. Many attempts have been made to find a theory that will explain the violation of *CP* conservation without accepting the implication that *T* is not conserved. A new "superweak" force was one of the proposed explanations. Recent experiments at the European Center for Nuclear Research (CERN) and at Princeton have eliminated this possible explanation and at the same time have reaffirmed the basic fact that *CP* is not conserved, leading to a renewed effort to solve what is probably the oldest physical (and metaphysical) problem—the nature of time. It is now known that there is a preferred time direction for certain interactions. The question now is: How does this connect with the direction of time as defined from entropy considerations or with the "psychological" time of man?

Renewed emphasis is being placed on neutrino physics. The neutrino has no charge, zero rest mass, and interacts very weakly with matter (a neutrino can travel through a million miles of solid lead without hitting anything). But the elusive neutrino plays a fundamental role in weak interactions. If present expectations are fulfilled, the decade 1960–70 will produce a millionfold increase in the number of events available for the particle physicists to analyze. At the moment, CERN is making an especially strong technological effort in this field.

For several years there has been some evidence that the theory of quantum electrodynamics (QED) breaks down at very small distances (about one hundred million millionth, or 10^{-14}, of a centimeter). In a recent German experiment, gamma rays bombarded a target, and electron-positron pairs were produced and observed as a function of incident gamma ray energy. The results agreed very well with the theory and disagreed with some of the prior experiments, and so one of the basic theories in physics now rests on a firmer foundation.

Particle Accelerators. The new 2-mile linear accelerator at Stanford University (SLAC) approached its full operating capacity in 1967. The new accelerator may be thought of as 960 accelerators, each 10 feet (3 meters) long.

The electrons ride the crest of moving radio waves produced by gigantic klystrons (oversized, ultrahigh frequency radio tubes). In each section the electrons gain energy. The timing is adjusted so that the electrons arrive at the next section just in time to be picked up by a new microwave.

The equipment used with the big accelerator is impressive. The primary apparatus includes three large spectrometers, two magnetic spark chambers, and two hydrogen bubble chambers. The longest spectrometer weighs 1,700 tons (about 1,540 metric tons) and measures angles to a precision of one hundredth of a degree. The beams of electrons, positrons, photons, and muons produced are superior in energy or purity to those available elsewhere.

A number of experiments with SLAC were approved in 1967. Among them were elastic electron-proton scattering to study the electromagnetic structure of the proton; photoproduction experiments, in which a photon strikes matter and creates such particles as pions and antiprotons; and the search for new particles.

More huge accelerators are on the way. In late 1967 the new Soviet proton synchrotron produced a beam of 76-BeV. Considerable work remains to be done before it is ready for full experimental use. Meanwhile, American physicists are also considering the next generation of accelerators—beyond the proposed 200-BeV machine to be built in Weston, Ill. One approach under active consideration is the colliding-beams scheme, in which nuclear interactions are observed between particles moving in oppositely directed high-energy beams. This method appears quite promising, and should be much cheaper than an equivalent standard synchrotron.

Pyramid Probe. In a rather ingenious wedding of physics and archaeology, an attempt is being made to locate undiscovered chambers in the great pyramids near Cairo. The basic idea is that cosmic-ray penetration will be greater when the path crosses an open chamber, and that by carefully counting in various directions one can map out the chambers (or cavities) within the pyramid. The physics of the operation involves the detection of muons from cosmic rays. The muons will be detected with a spark chamber, and the information recorded on magnetic tape for later sorting by computer.

As a first step, the experimentalists will test their apparatus on the great pyramid of Cheops (Khufu), which has been rather thoroughly and carefully explored. If the technique proves successful, the group will move to the pyramid of Khafre, or Chephren (Cheops' son), where only one passageway and one burial chamber have been found.

Nuclear Physics. During the past few decades nuclear physicists have created a number of elements beyond uranium, the heaviest "natural" element on earth. These transuranium elements are very exciting to the nuclear scientists, but a nagging problem has been their very short lifetimes. In 1967 a group at Lawrence Radiation Laboratory, California, created the heaviest known nucleus—mendelevium-258. Surprisingly, this isotope has a half-life (the time it takes for one half of the atoms to decay) of two months. As yet no one understands why mendelevium-258 lives so long.

General Relativity. Some 50 years after the first publication of Einstein's general theory of relativity, his name still represents physics to the public at large, to whom relativity still connotes abstruseness and unintelligibility. It is important, however, to make a distinction between special and general relativity. Special relativity involves comparatively simple mathematics. It has been thoroughly tested and proved experimentally, and is accepted without question in modern physics. General relativity—the theory of gravitation—is an altogether different subject. The critical point is the matter of experimental verification.

On the basis of his theory, Einstein predicted three phenomena: a gravitational red shift in the wavelength of light; a deflection of light as it passes a material object; and an excess amount of rotation of the axis of the planet Mercury around the sun. The strongest experimental evidence has been the close agreement with the experiment for Mercury's orbit. Einstein's calculations indicated a disagreement with the classical prediction for Mercury's orbit, and the experimental results agree with Einstein's predictions within 1%. Now recent evidence (obtained by R. H. Dicke of Princeton) indicates that the sun is somewhat elliptical rather than spherical. This could account for 8% of the classical excess in Mercury's orbit and thus leave Einstein's theory in disagreement with the experiment by 7%. Dicke and his collaborators have a somewhat different theory of gravitation, which appears to agree better with the new experimental results. The resulting furor is also leading to more sensitive experimental tests of general relativity.

Manpower Shortage. It appears that in about five years there will be a serious shortage of physicists in the United States. The important statistic is the number of bachelor of science degrees granted in physics. This number (now about 5,000 a year) has been declining slowly since 1964. Graduate school enrollment has been temporarily kept up by students entering from other fields and from other countries. The projected shortage will become quite serious in a few more years.

The root of the problem lies in the high schools. The number of teachers in the secondary schools with the equivalent of a B. S. degree in physics is all too small. Each year only about 200 new teachers with this training are accepting jobs in the nation's 26,000 high schools.

GARY MITCHELL
Columbia University

PLANTS. See AGRICULTURE—*Agricultural Research;* BOTANY; GARDENING AND HORTICULTURE.

PLASTICS

Expo 67 in Montreal dramatized the increasing use of plastics in construction. Plastics were used in many buildings at the exposition, as well as for displays, transportation, and seating. The United States pavilion was a transparent geodesic dome consisting of 2,000 acrylic plastic panels mounted on a steel framework. The Israeli pavilion had walls composed of translucent reinforced plastic panels.

Because of their toughness, resistance to corrosion, and light weight, plastic components are appearing with increasing frequency in farm equipment and machinery, including silos, fertilizer tanks, and tractor and plow parts. Plastics are also being used on ships for deck tiles, insulation, wall coverings, and glass-reinforced plastic lifeboats.

The packaging industry used over 2.5 billion pounds of plastics in 1967. About 60% of this was used in films and coatings for paper and cans. There was a great increase in the use of plastics for containers for food, drugs, and household products.

U.S. PRODUCTION OF PLASTICS, 1966–67

Material	1966 (millions of pounds)	1967*
Polyethylene	3,558	3,800
Vinyl resins (chloride, acetate, etc.)	2,670	2,600
Styrene resins (including copolymers)	2,385	2,400
Phenolic resins	1,047	970
Urea and melamine resins	718	630
Alkyd resins	666	640
Polypropylene	554	600
Polyesters	470	490
Coumarone-indene resins	334	290
Cellulose plastics	187	190
Epoxy resins	144	140
Miscellaneous resins	852	850
Total	13,585	13,600

* Estimate on basis of first six months. (Source: U.S. Tariff Commission.)

The capacity of oil pipelines is increased markedly by the addition of a few hundred parts per million of a soluble plastic, such as polyisobutylene, to crude oil and kerosene. The polymer acts to reduce the friction coefficient in turbulent flow.

Plastics have been developed that will act mechanically and chemically to make the walls of spacecraft self-sealing against possible puncture by micrometeroids.

GORDON M. KLINE
Technical Editor, "Modern Plastics"

PLAYS. See THEATER.

POETRY. See AMERICAN LITERATURE; CANADIAN LITERATURE; FRENCH LITERATURE; and articles on other national literatures.

POLAND

Foreign affairs dominated developments in Poland in 1967. In January, Poland received French support from General de Gaulle for Polish frontiers on the Oder-Neisse line. But at the same time, France welcomed an unconditional détente between West Germany and the countries of eastern Europe. The Poles feared that this policy of friendship with the West Germans, without any guarantees for the future, would lead to an ultimate sellout of their own position. A third of Poland's land area in the west was German territory before 1939 and is claimed by West Germany.

Foreign Affairs. In February, a conference of the the foreign ministers of the Warsaw Pact nations took place in the Polish capital, amid rumors that Hungary, Bulgaria, and possibly Czechoslovakia

POLAND • Information Highlights

EUROPE
AFRICA
ASIA

Area: 120,664 square miles (312,520 sq km).
Population: 31,811,000 (Dec. 31, 1966 est.).
Chief Cities: (1964 est.): Warsaw, the capital, 1,232,000; Łódź, 737,000; Kraków, 509,000; Wrocław, 466,000.
Government: *Chairman of the Council of State*—Edward Ochab (reelected June 24, 1965); *Premier*—Józef Cyrankiewicz (reelected June 24, 1965). First Secretary, United Workers party—Władysław Gomułka (took office 1956). *Parliament*—Sejm, 460 members (party seating, 1965: United Workers party, 256; United Peasants' party, 117; Democratic party, 39; others, 48).
Religious Faiths: Roman Catholics, 91.7% of population; others, 8.3%.
Education: *Literacy rate* (1960), 95% of population aged 14 and over. *Total school enrollment* (1964)—7,100,817 (primary, 5,207,936; secondary, 405,212; teacher-training, 79,655; technical, 1,176,790; higher, 231,224).
Finance (1966 est.): *Revenues*, $73,025,000; *expenditures*, $74,900,000; *monetary unit*, zloty (4.00 zlotys equal U. S.$1).
Net Material Product (1965): $134,250,000,000.
Economic Indexes (1966): *Industrial production*, 197 (1958=100); *agricultural production* (1964), 152 (1949=100); *cost of living*, 111 (1958=100).
Manufacturing (metric tons, 1966): Cement, 10,044,000; crude steel, 9,852,000; wheat flour, 1,776,000; beet sugar, 1,741,000; meat (1965), 1,733,000; wood pulp (1965), 502,000.
Crops (metric tons, 1966): Potatoes, 46,757,000 (ranks 2d among world producers); rye, 7,791,000 (world rank, 2d); sugar beets, 12,202,000; wheat, 3,648,000; oats, 2,674,000; barley, 1,431,000; apples (1965), 197,000.
Minerals (metric tons, 1966): Coal, 121,980,000 (ranks 5th among world producers); iron ore, 3,048,000; copper ore (1964), 2,247,000; salt (1964), 2,241,000; elemental sulfur (1965), 431,000; crude petroleum, 400,900.
Foreign Trade (1966): *Exports*, $2,272,000,000 (chief exports, 1965: coal, $259,875,000; rolled metal products, incl. pipes, $128,025,000; ships and boats, $109,700,000; coke, $54,975,000); *imports*, $2,494,000,000 (chief imports, 1965: cotton, $101,225,000; iron ore, $93,825,000; wheat, $80,875,000). *Chief trading partners* (1965): USSR (took 35% of exports, supplied 31% of imports); East Germany (took 7% of exports, supplied 10% of imports); Czechoslovakia (took 9% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 196,520 miles (316,260 km); *motor vehicles* (1965), 437,900 (automobiles, 234,100); *railways* (1965), 16,728 miles (26,915 km); *merchant vessels* (1966), 175 (986,000 gross registered tons); *national airline*, Polish State Air Service (LOT); *principal airport*, Warsaw.
Communications: *Telephones* (1966): 1,294,046; *television stations* (1967) 19; *television sets* (1967), 2,710,000; *radios* (1965), 5,646,000; *newspapers* (1965), 42 (daily circulation, 5,246,000).

would soon follow Rumania into a diplomatic rapprochement with West Germany.

Poland signed a series of mutual aid treaties with Czechoslovakia on March 1, East Germany on March 15, and Bulgaria on April 3. The pact with East Germany bound Poland to the defense of East German territorial integrity and independence, and indicated the two countries' mutual determination to resist West German claims in eastern Europe.

The visit by the Polish president, Edward Ochab, to Italy in April produced few tangible results. Worsening relations between Warsaw and the Vatican were underscored by Ochab's failure to call on Pope Paul VI while in Rome.

Internal Affairs. The regime's hostility toward Stefan Cardinal Wyszyński, who in 1966 had been pictured by the Communists as an appeaser of the West Germans, continued in 1967. The elevation of Karol Wojtyla to the rank of cardinal by Pope Paul led to efforts by the regime to split Poland's Roman Catholic hierarchy and isolate Cardinal Wyszyński as a lone opponent of communism.

The keynote of Communist party chairman Władysław Gomułka's domestic as well as international policy was closer reliance upon the Soviet Union. Internally this was reflected in more repressive measures toward the so-called "revisionists" and a shift in influence within the ruling Polish United Workers (Communist) party toward the authoritarian, anti-Western, so-called "partisan faction" led by Gen. Mieczysław Moczar, minister for internal affairs. The party undertook an intensified crackdown on writers, artists, and intellectuals suspected of disloyalty to the regime. The theme of the party central committee's meeting in May was the need for an intensified struggle against foreign subversion.

When the Israeli-Arab confrontation flared into open war in June, Gomułka not only hastened to the support of the Arab and Soviet side but, in a speech on June 19, issued a brusque warning to Polish Jews that Communist Poland would not tolerate a "fifth column" in its midst. Diplomatic relations with Israel were severed. The government's demand for a militantly pro-Arab attitude from its armed forces led to the dismissal of several recalcitrant officers.

The Middle East issue was troublesome for the regime inasmuch as many Poles were delighted by the swiftness and scope of Israel's victory. On the other hand, the elimination of those suspected of pro-Israeli leanings within the apparatus of the Polish party and government appeared to strengthen the power position of General Moczar's partisan group, which had always brought anti-Semitic elements in Poland into play against rival, more moderate segments of the party.

De Gaulle's Visit. In September, French President de Gaulle visited Poland. His reception in Warsaw and other Polish cities exceeded all previous welcomes extended to foreign visitors. De Gaulle attempted to draw Poland toward greater independence from the Soviets, emphasized traditional Franco-Polish ties, and urged the regime to play an independent European and world role. He publicly and repeatedly affirmed France's support for Polish frontiers in the west, and carefully avoided meeting Cardinal Wyszyński, so as not to offend Gomułka.

Notwithstanding the warm popular response, de Gaulle proved unable to budge the Polish regime from the position that Polish Foreign Minister Adam Rapacki had stated in Paris in January: there could be no normalization of Polish-German relations until West Germany itself openly acknowledged the permanence of the Polish frontiers and until it recognized East Germany. On September 11, Gomułka bluntly told President de Gaulle that the only reliable bulwark of Poland's security was its Soviet alliance, and recalled that in 1939 a Franco-Polish pact had failed to protect Poland from German aggression.

Economy. The tendency to cultural and political austerity promoted by the party was matched by a slowdown in economic development. According to an official report in March 1967, the increases in national income and agricultural output recorded in 1966 had fallen substantially behind the increases achieved the previous year. In the later part of 1967 there were imminent prospects of further curtailment of trade between Poland and the United States because of congressional anger over Polish contacts with and support of North Vietnam.

ALEXANDER J. GROTH
University of California at Davis

POLAR REGIONS. See ANTARCTICA; ARCTIC REGIONS.

POLICE

The Office of Law Enforcement Assistance of the U. S. Department of Justice moved forward in 1967 with its special program of development grants to plan and initiate university degree programs in police science and administration. A report, issued in 1967 by a presidential commission, noted that the extent of unreported crime in the United States is such that the situation is far more serious than available statistics indicate.

Education. Police educational programs continued to expand under the U. S. Office of Law Enforcement Assistance, with one institution after another adding the police science major to the curriculum. Police cadets in the Cincinnati, Ohio, police department will alternate academic work at the University of Cincinnati with police work, under a unique associate degree program inaugurated in September.

A survey of police crime laboratories was in progress under the auspices of the John Jay College of Criminal Justice, the City University of New York.

Crime. Setting a new landmark in the approach to the problem of crime and the criminal, the President's Commission on Law Enforcement and the Administration of Justice made available a 340-page treatise entitled *The Challenge of Crime in a Free Society*. In a nation in which since 1958 the volume of reported crime has increased six times faster than the rate of population increase, the presidential commission estimated that the actual number of crimes committed is three to four times greater than those known to the police.

Highway Safety and Motor Vehicle Licensing. In a strong editorial in *The Police Chief*, published by the International Association of Chiefs of Police, that professional organization called on Congress to provide funds for a comprehensive research program designed to foster greater safety on the nation's highways. It was estimated that more than 52,500 Americans died in traffic accidents during 1967.

The Massachusetts Registry of Motor Vehicles was in the process of assigning the social security number as the driver operator's license number. It thus joins several other states in the use of this universal means of identification.

Conferences. The Second National Symposium on Law Enforcement Science and Technology was scheduled for Chicago on April 16–18, 1968. The 28th International Congress on Alcohol and Alcoholism will be held in Washington, D. C., on Sept. 15–20, 1968.

Retirements. O. W. Wilson, veteran police administrator and the highest-paid police executive in the world, retired as superintendent of the Chicago police department on Aug. 1, 1967.

V. A. LEONARD
Washington State University

POLITICAL PARTIES

Disaffection with the administration of President Johnson, even within the dominant Democratic party, resulted in steeply declining popular support for the party as well as the President in 1967, and the prospect of a close presidential election in 1968 sharpened. For the first time since 1957, polls in November 1967 indicated that the Republican party was the more widely trusted to manage the country's problems. However, no leader in either party commanded overwhelming national confidence.

Major problems that threatened the administration, sometimes even in Democratic strongholds, were widespread uneasiness or outright opposition concerning U. S. military action in Vietnam, inflation, administration proposals for tax increases, growing crime rates, Negro riots in the cities, lower farm incomes, and a "credibility gap" between official claims and actual results.

In the scattered elections on November 7 only a few Democrats were turned out of office by Republicans, but the returns demonstrated that the party was weakening in cities that might be pivotal in the 1968 elections. Despite the polls and returns, President Johnson remained firm in his policies and optimistic in his outlook, and no political observer discounted his extraordinary ability to maintain the political middle ground.

In fact, the year's only presidential contender who unequivocally opposed the Johnson Vietnam policy was a fellow Democrat. Sen. Eugene J. McCarthy of Minnesota declared his candidacy for the Democratic presidential nomination on November 30 on the single issue of the war. He declared: "My decision to challenge the President's position and the Administration's position has been strengthened by recent announcements out of the Administration, the evident intention to escalate and . . . the absence of any positive indication or suggestion for a compromise or for a negotiated political settlement."

Congress. At the opening session of the 90th Congress, on January 10, Democrats outnumbered Republicans 247 to 187 (1 vacancy) in the House and 64 to 36 in the Senate. The House promptly reelected John W. McCormack of Massachusetts speaker. Carl Albert of Oklahoma remained Democratic floor leader, and Gerald R. Ford, Jr., of Michigan remained Republican floor leader. In the Senate, Mike Mansfield, Democrat of Montana, and Everett M. Dirksen, Republican of Illinois, continued as party leaders. Robert C. Byrd of West Virvinia defeated Joseph S. Clark of Pennsylvania (35 to 28) in the vote for secretary of the Senate Democratic Conference.

In March another vacancy in the House was created by the members' refusal to seat Rep. Adam Clayton Powell of New York, who had been charged with contempt of court and misuse of House funds.

Party Organization. On January 7, President Johnson asked John M. Bailey to continue as chairman of the Democratic National Committee, despite the expressed reservations of various governors and other leading Democrats. Before its annual meeting on October 9 the committee repaid the last of a $4 million debt contracted in the 1964 campaign. The committee expressed firm support of the President's policies, although the influential Americans for Democratic Action opposed both the war policy and the proposed income tax surcharge.

THE 1968 PRESIDENTIAL SWEEPSTAKES

WIDE WORLD

UPI WIDE WORLD UPI

(*Top*) Republican party leaders attending a fund-raising dinner in Washington, March 1, included (*left to right*) Gov. Ronald Reagan of California, former Vice President Richard Nixon, Gov. George Romney of Michigan, and Sen. Charles Percy of Illinois. Romney, by opening his campaign on November 18, was the first of the four openly to seek the presidency. (*Bottom*) Other potential or announced candidates for the presidency include (*from left*) Gov. Nelson Rockefeller of New York, Sen. Eugene McCarthy of Minnesota, and former Alabama Gov. George Wallace.

The Republican National Committee, under the chairmanship of Ray C. Bliss, continued conferences and training for party development. The Republican Coordinating Committee, composed of leading party figures, issued domestic policy statements, but, like the Democrats, it was deeply divided over Vietnam policy. A majority of leading Republicans in Congress, however, supported basic administration goals in Vietnam. (The Young Republican National Federation remained conservative in philosophy and at its meeting in Omaha on June 20–23 rejected reform proposals from the national committee.)

The respective national committees decided that the 1968 Republican nominating convention would convene at Miami Beach on August 5 and the Democratic convention in Chicago on August 26.

Prospects. Political observers assumed that President Johnson would be a candidate in 1968 and that he would have little difficulty obtaining the Democratic nomination. However, Senator McCarthy's announcement that he would oppose the President in selected primaries gave the opposition to the President a liberal political focus. It also tended to embarrass Sen. Robert F. Kennedy of New York, who had said he would campaign for Johnson. Kennedy's office hastened to explain that he intended to campaign for Johnson *after* the convention. Senator McCarthy, meanwhile, indicated that he would not be disturbed if his campaign resulted in the nomination of Kennedy.

Former Vice President Richard M. Nixon, the 1960 Republican nominee for president who had moved from California to practice law in New York, was the favorite candidate of organization Republicans and many rank and file party workers. Although he avoided an open announcement of candidacy, a national organization developed for him with his tacit blessing. By late November campaign organizations were being set up for him in at least six of the 15 state presidential primaries—in New Hampshire (March 12), Wisconsin (April 2), Indiana (May 7), Nebraska (May 14), Oregon (May 28), and South Dakota (June 4).

Gov. George W. Romney of Michigan, supported by many moderate and liberal Republicans, formally announced his candidacy on November 18 and set about entering primaries that would test his strength. Other possible candidates often mentioned were Gov. Ronald Reagan of California, a conservative leader, and Sen. Charles H. Percy of Illinois, supported by liberals and moderates.

Harold E. Stassen, a former governor of Minnesota, announced his candidacy on November 2, declaring that he would enter the Wisconsin primary as a peace candidate. Gov. Nelson A. Rockefeller of New York, who had endorsed Romney and who had repeatedly declared that he was not a candidate, nevertheless showed great strength in popular polls. Others mentioned as favorite son or regional candidates included Sen. John G. Tower of Texas, Sen. Mark O. Hatfield of Oregon, and Gov. James A. Rhodes of Ohio.

Former Democratic Gov. George C. Wallace of Alabama toured the country throughout 1967 as a potential third-party candidate. His appeal could be expected to divide conservative voting strength.

Franklin L. Burdette
University of Maryland

WIDE WORLD; (INSET) AFP, FROM PICTORIAL

SUPERTANKER, the *Torrey Canyon,* foundered off Cornwall, England, on March 18. Soon after the vessel broke up, polluting the ocean with thousands of tons of oil. The oil spread to the Brittany coast, where volunteers (*inset*) worked to remove it.

POLLUTION

In 1967 several regions of the United States had pollutional episodes that demonstrated widespread vulnerability to air and water pollution. More and more regions encountered troublesome problems in the disposal of solid wastes. However, the buildup of resources and the development of control techniques showed that a purposeful national effort was under way to contend with pollution problems. There also was increasing public awareness of pollution and increasing public support for its control.

AIR POLLUTION

Significant advances in combating air pollution were made in 1967. Studies were made on the air pollution problems in major metropolitan areas; President Johnson signed the Air Quality Act of 1967; the government pressed enforcement of interstate air pollution control; companies worked to develop electrically powered cars; and the Public Health Service established air quality criteria for sulfur oxides.

Smog Report. In October, Dr. Leonard Greenberg, chairman of the department of environmental and preventive medicine at the Albert Einstein College of Medicine, reported the results of a study on the stagnant air mass that covered New York City and other parts of the Atlantic seaboard in November 1966. The report showed that 168 deaths in New York City were caused by the smog that began on November 23. He said that although the smog lasted for only 3 days, an average of 24 deaths a day for a 7-day period were attributable to it.

After New York City officials had called a first-stage alert for the smog conditions, power companies switched from sulfur-containing fuels to sulfur-free natural gas, and a large number of apartment owners voluntarily discontinued the use of incinerators and reduced the heating of buildings. However, many experts believed that voluntary action alone should not be relied on to control pollution in large metropolitan areas.

Survey of Major Cities. The U. S. Public Health Service ranked the severity of the air pollution problems of 65 metropolitan areas. The survey was based on air pollution measurements and related data, including the average number of pollution particles in the air, the frequency and severity of air pollution conditions, the number of automobiles in a given area, the total gasoline consumption of the area, and the average concentration of sulfur dioxide in the atmosphere.

The results showed that New York City has the most severe air pollution problem of any major metropolitan area in the United States. The ranking of 20 metropolitan areas, in order of the severity of their air pollution problems, is as follows:

1. New York
2. Chicago
3. Philadelphia
4. Los Angeles-Long Beach
5. Cleveland
6. Pittsburgh
7. Boston
8. Newark
9. Detroit
10. St. Louis
11. Gary-Hammond-East Chicago
12. Akron
13. Baltimore
14. Indianapolis
15. Wilmington
16. Louisville
17. Jersey City
18. Washington
19. Cincinnati
20. Milwaukee

Legislation. In November, President Johnson signed the Air Quality Act of 1967. The law provides for a 3-year, $428-million program to combat air pollution. Of the total sum, $303 million is for the Department of Health, Education, and Welfare and $125 million for federal research on fuel pollutants and means of controlling them. The President said the act provided more funds to combat air pollution than the U. S. had ever spent on this problem.

The bill also increased the power of the secretary of Health, Education, and Welfare to act when there is a serious air pollution hazard. When such a condition occurs, the secretary can file suit against a specific polluter, such as a plant, and he can order motor vehicle traffic to be stopped in a city, practically immobilizing it. The secretary also was given authority to designate air quality control regions and to set up commissions to govern such regions if states within a region fail to take action.

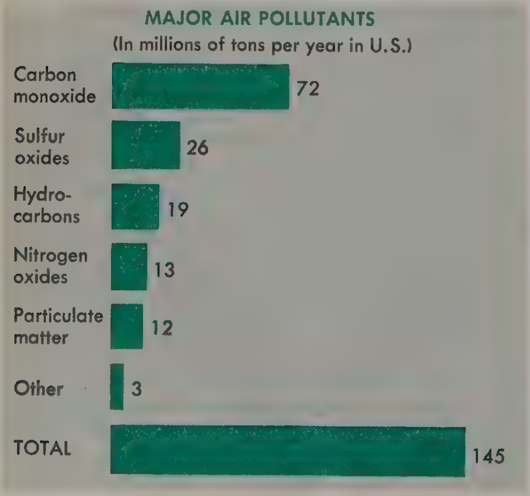
Enforcement. The federal program of enforcement of interstate air pollution control was stepped up during 1967. Six federal abatement conferences were called by the secretary of Health, Education, and Welfare under the Clean Air Act to prevent air pollution originating in one state affecting the health and welfare of persons in another state. The most significant enforcement action involved air pollution originating in both New Jersey and New York, affecting the property, vegetation, and health of persons in those states. The federal government asked both states to pass laws to reduce the sulfur dioxide content in the air in the New York-New Jersey metropolitan area. It was estimated that the annual cost of air pollution in the 17 counties involved is $3 billion, or $200 per person per year.

Automobiles. The U. S. Public Health Service reported that major automobile manufacturers and importers in the United States were working to fulfill the requirements of the Clean Air Act to limit the emission of vapors from the automobile crankcase and the emission of hydrocarbons and carbon monoxide from the automobile exhaust pipe. It was expected that all 1968 model automobiles sold in the United States would be equipped with emission control devices to meet the new federal standards. These devices decrease contamination of the atmosphere, but they lose efficiency because they deteriorate with use. Considerable research remains to be done before exhaust emission control devices for gasoline-powered engines can provide a pollution-free exhaust.

Widespread attention has been given to electrically powered vehicles as an alternative to the gasoline-powered engine because such vehicles would not pollute the atmosphere. The Public Health Service's National Center for Air Pollution Control has initiated studies of electrochemical power systems, and the major automobile manufacturers have made efforts to develop practicable electric power systems for vehicles. Westinghouse, General Electric, and other companies have built prototype electric cars. Nevertheless, it appears that technical and economic barriers stand in the way of large-scale production in the near future. (See also AUTOMOBILES.)

Sulfur Oxides. The Public Health Service issued a report entitled *Air Quality Criteria for Sulfur Oxides* that presents a compilation and analysis of data on the occurrence, behavior, and pollutional effects of sulfur oxides in the atmosphere. The document also presents air quality criteria to guide state and local governments in establishing standards for determining when sulfur dioxide concentrations in the atmosphere can reduce visibility, cause corrosion, destroy fabrics, damage vegetation, and cause an increase in cardiorespiratory disease in man.

National Conference. The Third National Conference on Air Pollution, sponsored by the Department of Health, Education and Welfare, was held in December 1966. Participants in the conference discussed a wide range of air pollution problems and methods to control air pollution.



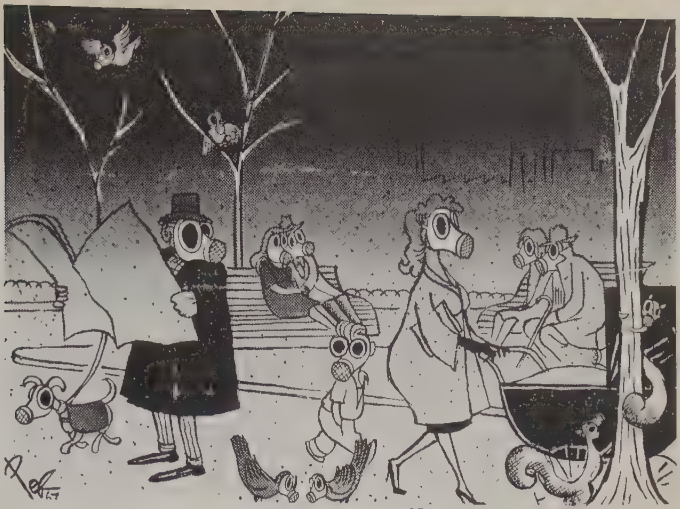
SOURCES OF AIR POLLUTION

(In millions of tons per year in U.S.)

	Carbon monoxide	Sulfur oxides	Nitrogen oxides	Hydro-carbons	Particulate matter	TOTAL
Motor vehicles	66	1	6	12	1	86
Industry	2	9	2	4	6	23
Power plants	1	12	3	1	3	20
Space heating	2	3	1	1	1	8
Refuse disposal	1	1	1	1	1	5
TOTAL	72	26	13	19	12	142[1]

[1] Not including 3 million tons of miscellaneous pollutants.

Source: The National Center for Air Pollution Control



"1984 (or Tomorrow?)"

PEB, FROM THE PHILADELPHIA INQUIRER

WATER POLLUTION

Public awareness of water pollution problems increased markedly during the year. Alarm over detergents and other substances that caused overgrowths of algae and other aquatic weeds in inland waters was demonstrated by bills introduced in Congress. These bills called for vastly increased research for protection of the nation's inland waters.

The nation's water pollution control agencies were concerned about many sources of water pollution, including storm-water runoff in urban areas, overflows of combined sewers, heated discharges from coal-fired power plants and nuclear power plants, agricultural land drainage, mine drainage, return flows from irrigated lands, and discharges from watercraft particularly boats for recreation.

Water Quality Standards. The success of all but two of the states and territories in meeting the June 30, 1967 deadline for submitting to the Department of the Interior the water quality standards proposed for their interstate waters was a most encouraging indication of federal and state determination to abate pollution.

A number of the states reinforced their water pollution control programs by voting bond issues to provide grants to municipalities for construction of sewage treatment plants. However, some states claimed that the momentum of the national effort to combat municipal pollution had been reduced by the Federal Water Pollution Control Administration's request to Congress for only $203 million for construction grants, rather than the $450 million authorized by the Clean Waters Restoration Act of 1966.

Ship Disaster. The 936-foot oil tanker *Torrey Canyon,* which ran aground on submerged rocks off the coast of England on March 18, released 60,000 tons of crude oil. The oil caused widespread destruction of marine and wildlife resources in southwest England. The incident heightened worldwide concern over vulnerability to oil pollution, and this concern was sharpened by the knowledge that tankers with a capacity of 500,000 gross tons would be in operation within a few years.

The *Torrey Canyon* episode sparked a keen interest in oil pollution problems in the United States. Two major incidents of coastal fouling by oil were reported in 1967—one off the coast of New Jersey and one off Cape Cod. In both cases, the pollution was attributed to the release of oil from tankers sunk during World War II.

Pollution from Watercraft. The continuing discharge of untreated sewage from vessels is a hazard to public health because it contaminates shellfish beds, sources of drinking water, and bathing beaches. In addition, the routine disposal of oils, bilge, and garbage into the nation's waterways is grossly offensive. Perhaps most important of all, the very rapid increase in the use of recreational watercraft caused concern about the contamination of valuable inland waters by human wastes. The National Sanitation Foundation of the University of Michigan, assisted by health and conservation agencies and boat and equipment manufacturers, has developed a tentative standard for equipment to be used in the disposal of human wastes from recreational watercraft.

SOLID WASTE DISPOSAL

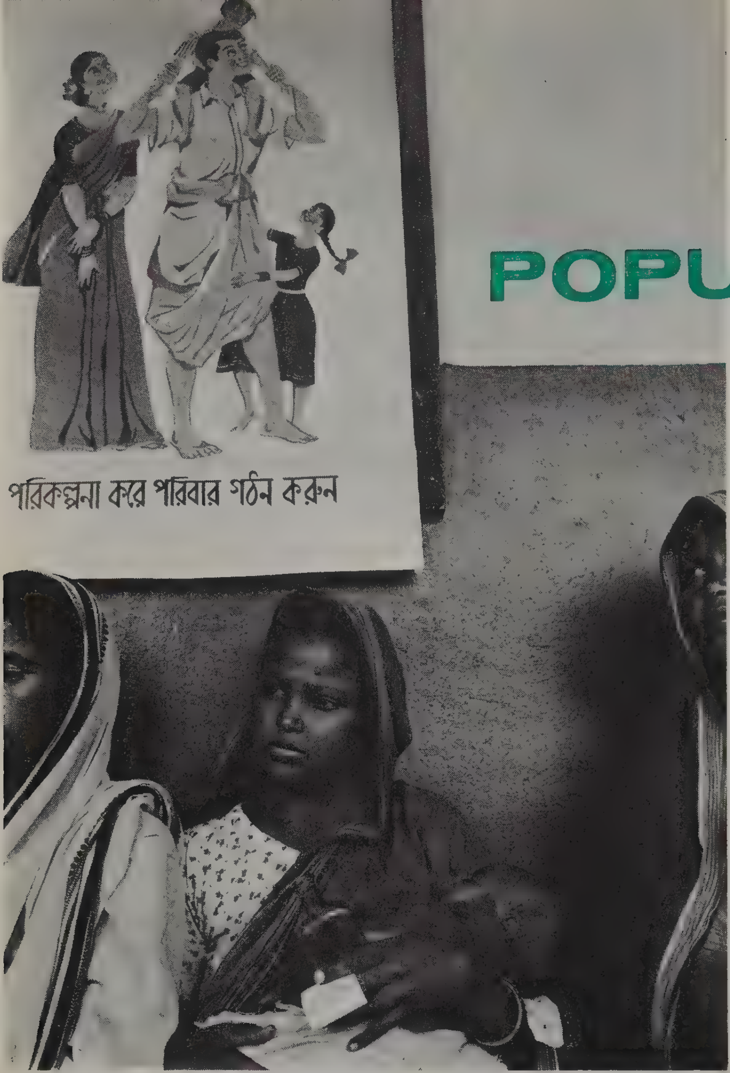
In many areas the need to find a satisfactory method for refuse disposal was the most pressing problem in environmental pollution control. Better methods of refuse disposal are urgently needed because of the increasing per capita production of refuse, the increasing shortage of suitable land for sanitary fill, the growing impatience with hazardous open dumps, the unsatisfactory performance of most incinerators, and the increasing air and water pollution resulting from current methods of solid waste disposal. To deal with immediate problems, the Public Health Service will issue guidelines for the design and operation of sanitary landfills and refuse incinerators, and it will propose a code for the regulation of solid wastes.

Studies. The Public Health Service initiated studies on ways to improve methods of waste classification, measurement, and analysis; ways to develop more efficient incinerators; and ways to maximize the potential of composting. The city of Philadelphia made a study of the practicability of hauling refuse by railroad to distant disposal sites, and Harvard University examined the feasibility of using an incinerator on an oceangoing ship to burn refuse.

Proposed Legislation. Bills were introduced in Congress to extend permanently the Solid Waste Disposal Act, which is due to expire in 1969. The proposed legislation also seeks to provide grants for constructing incinerators and for encouraging regional planning for refuse disposal.

BERNARD B. BERGER
Director, Water Resources Research Center
University of Massachusetts

POPULATION


পরিকল্পনা করে পরিবার গঠন করুন

INDIAN MOTHERS, seated below a poster advocating smaller families, await their turn at a family planning clinic at a village in India.

RAGHUBIR SINGH, NANCY PALMER AGENCY

POPULATION

There were further indications in 1967 that groups traditionally opposed to birth control were beginning to shift position. During the year, too, population-control programs begun earlier in underdeveloped countries continued to show results.

CONTROLLING POPULATION GROWTH

During the decade from the mid-1950's to the mid-1960's, programs to reduce the fertility of underdeveloped areas began to show results in a number of instances. In Nationalist China (Taiwan), to take a notable example, the birthrate fell during this period from about 45 to about 32 per 1,000 population. Extrapolating this initial success, several U.S. demographers expressed a considerable optimism concerning international efforts to reduce population pressure. In fact, however, those countries where birth control programs have succeeded to any extent—Puerto Rico, Jamaica, Taiwan, Singapore, South Korea, Thailand, and one or two others—are small and comparatively easy to administer.

A more realistic prognosis concerning the population growth of all underdeveloped areas must be based on the fact that in many countries (especially in Africa and Latin America) government programs to cut natality have not yet started, and in others (notably the larger countries of Asia) attempts to reduce family size have had no discernible effect.

The Example of India. Among the large and complex countries typical of the underdeveloped world as a whole, India is currently making the most strenuous effort to reduce its staggering population growth rate. The national program, which was somewhat half-hearted in the first years after independence, developed momentum after the 1961 census showed how fast the population was increasing.

One problem was choosing the most appropriate contraceptive method. Oral progesterones, in pill form, are inordinately expensive and have never become popular in India. Intrauterine devices, which some have seen as the ideal means for poor countries, have been far less successful in India than elsewhere. According to a number of studies reported at the 1967 international population conference in Sydney, Australia, a tenth of the Indian women using the intrauterine devices expelled them automatically, and a third removed them because of excessive bleeding, pain, or discomfort, or the fear generated by the bleeding of other users. During the first year (1965–66) of a 5-year program, 800,000 devices were distributed. The following year, only about 790,000—far short of the target of 6 million—were inserted.

In 1967, Dr. Sripati Chandrasekhar became

WORLD POPULATION ESTIMATES
(In millions, at midyear of years shown)

Region	1950	1960	1965	1966	Annual % Increase 1960-66
World	2,517	3,003	3,285	3,356	1.9
Africa	222	277	310	318	2.3
North America[1]	166	199	292	299	1.5
South America	163	213	165	171	2.9
Asia[2]	1,381	1,659	1,825	1,868	2.0
Europe[3]	392	425	444	449	0.9
Oceania[1]	12.7	15.7	17.5	17.9	2.1
USSR	180	214	231	233	1.4

[1] Hawaii, a state of the United States, is included in North America rather than Oceania. [2] Excluding the USSR, shown separately, but including both the Asian and European portions of Turkey. [3] Excluding the USSR, shown separately, and the European portion of Turkey, which is included in Asia.

India's minister of health and family planning. A world-renowned demographer, he had spent much of his professional life advocating that India control its population growth. With his appointment came a new emphasis on sterilization, which he had termed "of all the methods tried so far the only one that has yielded significant results." As a member of Parliament, Chandrasekhar had suggested that India request permission of the U.S. government to use counterpart funds accumulated in India to pay a sizable cash bonus as an incentive to each man undergoing a vasectomy. Nothing, however, came of the proposal.

In fact, many of the men who have been willing to undergo the often irreversible operation are well along in years and already have a sizable number of offspring. If voluntary sterilization is to solve the population problem of India, means must be found to meet the ethical, social, and practical objections that many Indians have to it.

NEW SUPPORT FOR CONTRACEPTION

In the years since World War II, the attempts in UN agencies and other international bodies to foster family-planning programs have been opposed most vigorously by Roman Catholic and Communist representatives, who cooperated on this issue even when they were opposed on all others. That dissident views were expressed far more openly and forcefully in the mid-1960's may mean that ideological blocks to family planning will be less important in those underdeveloped countries in which one or the other doctrine dominates.

The Catholic Position. The high point of internal criticism of the Roman Catholic position on birth control was the memorandum submitted by a majority of the papal commission appointed to investigate the matter. The commission reported to Pope Paul VI in 1966, and in the spring of 1967 a full English translation of both the majority and the minority statements was published. The former condemned abortion outright and sterilization as "generally to be excluded," but specified no licit method of contraception. The means should be selected by "the couple" on the basis of the following criteria: "the whole meaning of the mutual giving and of human procreation shall be kept in a context of true love"; the method shall be effective, with the least possible number of negative side effects, whether biological, hygienic, or psychological; and no absolute rules shall apply, for the best means may depend on the situation of "a certain couple."

This statement by a representative international body of Roman Catholic theologians and lay experts proposing that the church sanction contraception is the clearest evidence to date that the position of the Roman Catholic Church is in flux.

A Soviet View. In 1966 a series of articles appeared in the Soviet journal *Literary Gazette* offering a rationale for revising Communist orthodoxy on contraception. The most forthright statement was by the Soviet demographer E. Arab-Ogly, who without equivocation rejected the former view that the supposedly more efficient organization of a socialist society made it possible to absorb without economic cost any population growth whatever. The state, he wrote, is not entitled to decide for the people who should have children and how many, but "it is entitled to influence the wishes of people to have more or fewer children, to free them from prejudices, and to place at their disposal the best and most harmless means of contraception."

While Soviet dissidents, like their Roman Catholic counterparts, try to base their positions on traditional doctrine, in both cases what they want in fact resembles very closely what had until now been condemned as the kernel of heterodox thinking.

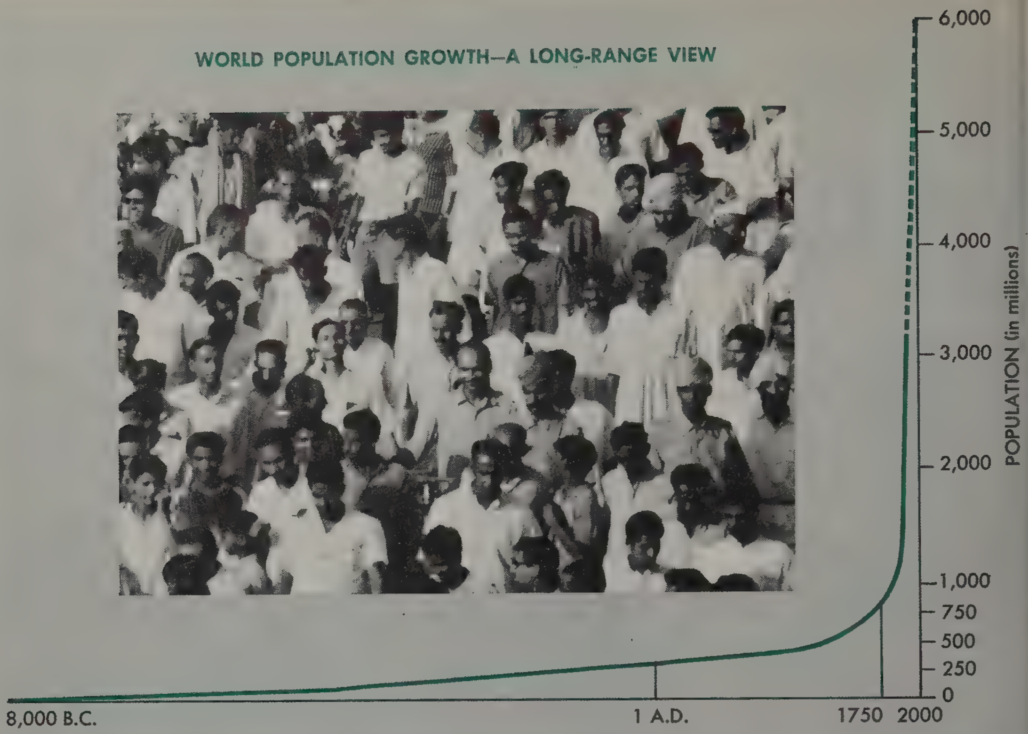
Chinese Program. Orthodoxy is more rigidly adhered to in Communist China—at least in words—but that state also is reacting to the pressure of its growing millions. During the manic phase of the "Great Leap Forward" (1958–60), China's vast population was seen by the country's leaders as its greatest economic asset, and birth control was condemned. After the failure to realize the program's grandiose goals, however, Chinese leaders again reversed the line on contraception.

According to a U.S. analysis published in 1967, the vigorous birth control program that has been initiated in Communist China has evidently been successful in the cities and has recently been extended to certain limited rural areas. In some cases the state has denied rations to fourth and subsequent children in a family, in order to reinforce its policy of limiting family size.

PRESIDENT JOHNSON speaks at a ceremony in the Department of Commerce as the census clock that registers U. S. population reaches 200,000,000 on Nov. 20, 1967.

UPI

CURRENT POPULATION
of the UNITED STATES
200 000 000



WORLD POPULATION GROWTH—A LONG-RANGE VIEW

Source: Population Studies Center, in the *Annals* of the American Academy of Political and Social Science (January 1967)

POPULATION IN THE UNITED STATES

At 11 o'clock in the morning of Nov. 20, 1967, the Census Bureau's "population clock" in Washington registered a total of precisely 200 million Americans. Most demographers believe that in fact this total had been passed many months before, but the official recognition of the figure brought to the country a wider awareness of its great size.

While the population of the United States is increasing by only about 1.1% per year, with so large a base this means an annual increment of more than 2 million. Moreover, the rate of growth will almost certainly go up shortly, for the number of young people in their 20's (the product of the post-1945 baby boom) will greatly increase during the next 15 years. With the rise in the number of potential parents—even if the average family size remains stable—the birthrate will rise and with it also the rate of population increase.

Migration Trends. According to Census Bureau estimates, the migration trends showed some surprising changes from the past. The movement to the West continued: California gained more than 3.1 million people between 1960 and 1966, and Nevada continued to have the highest growth rate of any state. But the migrations out of the South and the Northeast, movements characteristic of the whole of this century, were reversed. In the same 6-year period, the South gained about 800,000 and the Northeast almost 450,000 from net in-migration. According to provisional figures, this pattern was continued in 1967.

Negroes, however, continued to move out of the South. Between 1940 and 1966 there was a net migration of 0.9 million whites into the region, and a net migration of 3.7 million Negroes out of it. While 60% of the total Negro population still lived in the South as recently as 1960, six years later this figure was 55%. In 1966 an estimated 56% of the country's Negro population lived in the central cities of the metropolitan areas, of whose total population they constituted one fifth.

In the mid-1960's, special censuses were taken in 12 large cities, in most of which the proportion of Negroes living in predominantly Negro neighborhoods had increased since 1960. According to these censuses, the cleavage between poor and middle-class Negroes is increasing greatly. Outside the poor neighborhoods of Cleveland, to take one example, the average income of Negro families rose between 1960 and 1965, and the number of broken families was cut. But in the Hough district of Cleveland, one of the worst of the poor areas, the incidence of poverty and of broken homes increased, and that of male unemployment was virtually unchanged.

Infant Mortality. There was increasing public concern about the country's relatively poor record in the control of infant mortality. The U.S. rate in 1965—24.1 infant deaths per 1,000 live births—was higher than that in 14 other countries, and even the rate for U.S. whites was higher than that in 11 of those countries. The infant mortality rate of Negroes, 39.8 per 1,000 live births, was similar to that in such lesser developed countries as Jamaica.

After 1965 the earlier steady decline in the infant mortality rate in the United States was resumed, with 23.4 recorded in 1966 and 22.9 in the first half of 1967. It is now estimated that those who survive to their first birthday do not face the same risk of death until their 65th year.

(See also DEATH RATES; PUBLIC HEALTH.)

WILLIAM PETERSEN
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VITAL STATISTICS OF LEADING COUNTRIES

Crude birthrate—per 1,000 persons. *Crude death rate*—per 1,000 persons, excluding stillbirths. *Infant mortality rate*—deaths of infants under one year old per 1,000 live births, excluding stillbirths. *Annual increase*—average percentage increase of total population. *Life expectancy*—average expectation of life (in years) at birth. *Population per sq mi*—total area, including inland water. (Sources: United Nations Statistical Office, *Demographic Yearbook 1966* and *Population and Vital Statistics Report*, October 1967.)

	Estimated population (mid-1966)	Crude birth-rate	Crude death rate	Infant mortality rate	Annual % increase (1958–66)	Life expectancy at birth			Pop. per sq mi (1966)
						Male	Female	Period	
Africa									
Algeria	12,150,000[1]	48.2	11.0	70.1	2.0	35.01[4]		(1948)	19.3
Congo, Dem. Rep. of	15,986,000[2]	43	20.0	104	2.2	37.64[2]	40.0[2]	(1950–52)	27
Ghana	7,945,000	47–52	24.0	156	1.9	38.7		(1948)	127.4
Ivory Coast	3,920,000[1]	56.1	33.3	...	2.8	35		(1957–58)	46.3
Malagasy Republic	6,200,000	35.3	13.6	75	3.6	...	...	...	46.3
Morocco	13,725,000	46.1	18.7	149	2.6	49.6		(1960)	115.8
Nigeria	58,600,000[1]	53–57	...	...	2.0	...	...	...	243.2
South Africa	18,298,000	46	15.8[2,3]	136.1[2,3]	2.4	64.6[5]	70.1[5]	(1950–52)	57.9
Sudan	13,940,000	51.7	18.5	93.6	2.8	...	...	...	23
Tunisia	4,470,000[1]	45.1	26.0	74.3	1.2	...	...	...	104.2
United Arab Republic	30,147,000	41.2	15.8	118.6	2.5	51.6	53.8	(1960)	115.8
North America									
Canada	20,045,000	19.6	7.6	23.6	1.9	68.35	74.17	(1960–62)	7.7
Costa Rica	1,486,000	39.5	7.7	69.9	4.1	61.87	64.83	(1962–64)	112.0
Dominican Republic	3,754,000	33.6	7.1	81.1	3.6	57.15	58.59	(1959–61)	297.3
El Salvador	3,037,000	45.2	9.9	61.7	3.4	56.56	60.42	(1960–61)	548.3
Guatemala	4,575,000	44.2	16.6	91.5	3.1	43.82	43.52	(1949–51)	162.2
Honduras	2,363,000	43.7	8.6	41.2	3.3	...	...	...	81.1
Mexico	44,145,000	44.3	9.6	62.9	3.4	55.14	57.93	(1956)	84.9
Nicaragua	1,715,000	43.1	7.3	51.6	3.2	...	...	...	50.2
Panama	1,287,000	39.9	7.4	44.7	3.2	57.62	60.88	(1960–61)	65.6
Puerto Rico	2,668,000	28.3	5.9	42.8	1.9	67.14	71.88	(1959–61)	1,158.3
United States	196,920,000	18.5	9.5	23.4	1.5	66.8	73.7	(1965)	81.1
South America									
Argentina	22,691,000	21.4	8.2	59.3	1.6	63.7	69.5	(1960–65)	30.9
Bolivia	3,748,000	20.8	5.8	86.0	1.4	49.71		(1949–51)	11.6
Brazil[6]	83,175,000	41–43	10–12	170	3.0	39.3	45.5	(1940–50)	38.6
Chile	8,750,000[1]	32.0	10.7	107.1	2.3	49.84	53.89	(1952)	46.3
Colombia	18,650,000	36.7	9.9	82.4	3.2	44.18	45.95	(1950–52)	61.8
Ecuador	5,326,000	44.0	11.7	93.0	3.3	50.4[7]	53.7[7]	(1949–51)	69.5
Peru[6]	12,012,000	30.1	8.4	66.5	3.0	51.92	53.65	(1961)	34.7
Uruguay	2,749,000	25.1	8.7	47.4	1.4	46.1[8]		(1940–43)	57.9
Venezuela[6]	9,030,000	43.5	7.1	47.4	3.6	45.8	47.6	(1941–42)	38.6
Asia									
Cambodia	6,320,000	41.4	19.7	127	2.6	44.2	43.3	(1958–59)	135.1
Ceylon	11,491,000	32.9	8.1	55.8	2.6	60.3	59.4	(1954)	675.7
China, Communist	710,000,000	34	11	...	1.5	...	...	...	285.7
China, Nationalist	12,791,000	32.5	5.5	22.2	3.3	61.33	65.6	(1959–60)	1,374.5
India	498,680,000	20.8	8.2	72.8	2.4	41.89	40.55	(1951–60)	629.3
Indonesia	107,000,000	24.0	11	74.7	2.3	...	...	...	278
Iraq	8,338,000	20	4.1	23.7	3.1	...	...	...	73.4
Israel	2,629,000	25.4	6.2	27.4	3.5	70.52	73.19	(1965)	490.3
Japan	98,865,000	13.7	6.8	18.5	1.0	67.73	72.95	(1965)	1,030.9
Jordan	2,040,000	46.2	5.0	42.0	3.2	52.6	52	(1959–63)	81.1
Korea, South	29,086,000	44.7	16.0	...	2.8	51.12	53.73	(1955–60)	1,139.
Malaysia	9,725,000	35.7	5.7	40.9	3.5	55.78	58.19	(1956–58)	27
Mongolia	1,140,000	40.0	9.7	...	3.0	...	...	...	3.9
Pakistan	105,044,000	43.4	13.9	130.4	2.1	53.72	48.8	(1962)	428.6
Philippines	33,477,000	24.6	7.3	72.9	3.3	48.8	53.4	(1946–49)	432.4
Syria	5,450,000	32.1	4.4	28.1	3.0	...	...	...	112
Thailand	31,508,000	36.5	7.1	37.8	3.0	53.6	58.7	(1960)	235.5
Vietnam, South	16,543,000	27.7	6.4	36.7	3.1	...	...	...	374.5
Europe and USSR									
Austria	7,290,000	17.6	12.5	28.1	0.5	65.6	72.03	(1959–61)	335.9
Belgium	9,528,000	15.8	12.0	25.5	0.6	67.73	73.51	(1959–63)	1,204.6
Bulgaria	8,257,000	14.9	8.3	32.2	0.8	67.82	71.35	(1960–62)	285.7
Czechoslovakia	14,240,000	15.6	10.0	23.7	0.7	67.76	73.56	(1964)	428.6
Denmark	4,797,000	18.4	10.3	18.7	0.8	70.3	74.6	(1963–64)	428.6
Finland	4,639,000	16.7	9.4	17.6	0.8	64.9	71.57	(1956–60)	54.1
France	49,400,000	17.5	10.7	21.7	1.2	68	71.5	(1964)	347.5
Germany, East	17,067,000[9]	15.8	13.3	23.2	−0.2	68.27[9]	73.34[9]	(1963–64)	571.4
Germany, West	59,676,000[9]	17.8	11.3	23.6	1.2	67.59	73.45	(1964–65)	895.8
Great Britain	54,744,000	17.9	11.8	19.6	0.7	68.3	74.4	(1963–65)	868.7
Greece	8,614,000	17.9	7.9	34.0	0.7	67.46	70.7	(1960–62)	251
Hungary	10,179,000	13.6	10.0	38.4	0.4	67	71.83	(1964)	420.8
Iceland	195,000	24.7	6.7	15.0	1.8	70.70	75	(1951–60)	77.2
Ireland	2,884,000[1]	21.6	12.2	24.9	0.1	68.13	71.86	(1960–62)	158.3
Italy	51,962,000	18.9	9.5	35.6	0.7	67.24	72.27	(1960–62)	664.1
Netherlands	12,455,000	19.2	8.1	14.7	1.4	71.1	75.9	(1961–65)	1,432.4
Norway	3,754,000	17.8	9.5	16.8	0.8	71.32	75.57	(1956–60)	46.3
Poland	31,698,000	16.7	7.3	38.8	1.2	64.8	70.5	(1960–61)	390
Portugal	9,218,000	22.3	10.9	65.0	0.7	60.73	66.35	(1959–62)	386.1
Rumania	19,143,000	14.3	8.2	46.7	0.7	65.35	70.25	(1963)	312.7
Scotland	5,191,000	18.6	12.3	23.2	0.2	66.34	72.45	(1963–65)	258.7
Spain	31,871,000	20.9	8.6	34.6	0.8	67.32	71.9	(1960)	243.2
Sweden	7,808,000	15.8	10.0	12.6	0.7	71.6	75.7	(1961–65)	65.6
Switzerland	5,999,000	18.3	9.3	17.8	1.9	69.5	74.8	(1959–61)	567.6
USSR	233,180,000	18.2	7.3	26.5	1.5	66	74	(1964–65)	38.6
Yugoslavia	19,735,000	20.2	8.0	61.3	1.2	62.41	65.58	(1961–62)	297.2
Oceania									
Australia[10]	11,541,000	19.3	9.0	18.2	2.0	67.92	74.18	(1960–62)	7.7
New Zealand	2,676,000	22.5	8.9	17.7	2.0	68.44	73.75	(1960–62)	38.6

[1] United Nations estimate. [2] African population only. [3] 1965. [4] Muslims. [5] White population only. [6] Excluding Indian jungle population. [7] For Quito. [8] For Lima. [9] Including Berlin sector. [10] Excluding full-blooded aborigines

WIDE WORLD

AFTER THE RAINS that flooded the Lisbon area in November 1967 and took over 400 lives, a young girl salvages her TV set.

PORTUGAL

On April 28, 1967, a day after he had completed his 39th year in power, Premier Antonio de Oliveira Salazar celebrated his 78th birthday. He has encountered frequent challenges to his power, but he has successfully weathered every crisis.

Earlier in the month, on April 5, about 300 Portuguese royalists staged a major monarchist celebration, following an elaborate ceremony organized by the government to commemorate the return to Portugal of the remains of Prince Miguel, a Portuguese pretender who died in exile in 1866. The National Union party is the only one permitted in Portugal, but monarchists are tolerated. Accompanying Premier Salazar at the airport, where the coffin of Dom Miguel was received, was Dom Duarte, grandson of the deceased, who is now pretender to the Portuguese throne. The publicity given to this event aroused speculation that Premier Salazar, who has long been suspected of monarchist sympathies, may favor a restored monarchy to succeed him.

The Portuguese were jubilant over the 1967 pilgrimage of Pope Paul VI to Fatima, 60 miles (97 km) north of Lisbon. Over 90% of the 9.2 million inhabitants of Portugal are Roman Catholic. When the Pope flew from Rome to Fatima on May 13, he was greeted by more than 1 million fellow pil-

PORTUGAL • Information Highlights

EUROPE
AFRICA

Area: 35,510 square miles (91,971 sq km).
Population: 9,228,000 (Dec. 31, 1966 est.).
Chief City (1965 est.): Lisbon, the capital, 822,000.
Government: *President*—Américo de Deus Rodríguez Tomás (took office Aug. 9, 1958); *Premier*—Antonio de Oliveira Salazar (took office April 27, 1928). *Parliament*—National Assembly, 130 members.
Religious Faiths: Roman Catholics, 91.5% of population.
Education: *Literacy rate* (1960), 62% of population aged 15 and over. *Total school enrollment* (1964)—1,236,580 (primary, 894,195; secondary, 151,752; teacher-training, 3,168; technical, 155,350; higher, 32,115).
Finance (1966 est.): *Revenues,* $604,600,000; *expenditures,* $604,500,000; *monetary unit,* escudo (28.75 escudos equal U. S.$1).
Gross National Product (1966): $4,012,440,000.
National Income (1966): $3,441,720,000; average annual income per person, $373.
Economic Indexes: (1966): *Industrial production,* 178 (1958=100); *agricultural production* (1965), 112 (1956–57=100); *cost of living,* 124 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,716,000; wine, 807,000; wheat flour, 446,400; gasoline (1965), 391,000.
Crops (metric tons, 1966): Figs (1964), 366,000 (ranks 1st among world producers); grapes, 1,130,000.
Minerals (metric tons, 1965): Pyrites, 613,664; anthracite coal (1966), 420,000; iron ore (1966), 186,000.
Foreign Trade (1966): *Exports,* $627,200,000 (chief exports: cork, $54,670,800; wine, $46,945,000; fish, $31,917,600); *imports,* $1,012,500,000 (chief imports, 1965: nonelectrical machinery, $126,405,000; transport equipment, $76,970,000; raw cotton, $58,728,000). *Chief trading partners* (1965): Britain (took 18% of exports, supplied 13% of imports); West Germany (took 8% of exports, supplied 17% of imports).
Transportation: *National roads* (1964), 10,952 miles (17,625 km); *motor vehicles* (1965), 366,433 (automobiles, 265,092); *railways* (1965), 2,238 miles (3,602 km); *merchant vessels* (1966), 93 (607,000 gross registered tons); *principal airport,* Lisbon.
Communications: *Telephones* (1966): 550,490; *television stations* (1965), 4; *television sets* (1965), 180,000; *radios* (1965), 1,173,000; *newspapers* (1965), 29.

grims. At Fatima, Paul urged world peace.

On the weekend of November 25–26, floods resulting from a heavy rainfall struck the Lisbon area, causing the deaths of more than 400 persons. The town of Quintas, 20 miles (32 km) north of Lisbon, was especially hard hit.

Women's Rights. In July a new Portuguese civil code became effective. Although it conceded increased independence to married women, it continued to deny them legal equality with their husbands. The minister of justice, Antunes Varela, declared that the recognition of legal equality between men and women would ignore the "profound natural inequality of the two sexes which is at the basis of matrimonial union." However, the government has named women to important posts, including those of cultural counselor to the embassy at Rio de Janeiro, director general of a department in the ministry of health, and secretary to the minister of health. In addition, three women are deputies in the National Assembly.

Economy. In 1967 agriculture remained the principal economic problem in Portugal. Industrial activity continued to expand, but at a slow rate because of labor shortages and restrictions on credit. The guerrilla warfare in Portuguese Africa stimulated the economy but consumed about 40% of the national budget. The gross national product rose only 4% to 5% in 1966, a decline from 7% in 1965. This was attributed to the decrease in agricultural production and the failure to curb inflation.

Since agrarian reform would infringe upon the privileges of the landed proprietors (the most influential supporters of the Salazar regime), no serious attempt has been made to resolve the agricultural crisis. The practice has been to import food rather than to stimulate its production. However, the increasing necessity of importing food has produced a deteriorating balance of trade.

While labor shortages produced a steady increase in wages during 1966 and 1967, there were other inflationary pressures. Emigrants sent much of their earnings back to Portugal, and the 1.8 million tourists contributed $210 million in foreign exchange in 1966. Despite an increase of 14.9% in the trade deficit, the balance of payments was favorable in 1966 and the $1 billion gold and foreign exchange reserve was 9% higher than in 1965.

The low cost of labor, which was persistent in spite of rising wages, attracted an increasing number of foreign investors in 1967. Some Portuguese economists feared that foreigners were taking advantage of opportunities neglected by native Portuguese, as foreign investments rose from 1% in 1959 to 25% of the total private investment in 1966. Low tax rates and exemptions from taxes and import duties attracted foreign investors, even though they faced nuisance taxes, a complicated bureaucracy, and an antiquated customs system. But as long as the Salazar regime provides stability and forbids strikes, Portugal will remain a magnet for foreign capital.

In July 1967 the government announced a new and ambitious 6-year development plan aimed at raising the Portuguese economy to European levels. The objectives of the plan, which is to become effective in 1968, are an acceleration in the rate of economic growth, greater equality in the distribution of national income, and the gradual correction of imbalances in regional development. It was expected that the new plan would counter the current recession and inflation. It would provide an investment of 167.5 billion escudos ($5.8 billion), of which one fourth would be expended in Portugal's overseas possessions. On December 27 the government announced a 10% increase in the national budget for 1968.

Emigration. In August 1967 the government began to restrict the emigration of skilled urban and farm workers in order to combat the labor shortage. In addition to the 120,739 emigrants who left Portugal legally in 1966, an estimated 4,000 persons left Portugal illegally. While vigorous police action and heavy penalties are expected to restrict the illegal exodus, the ministry of interior is also taking steps to restrain legal emigration.

Portuguese Territories. Portugal was stimulated to a more determined defense of its overseas territories in Africa by the discovery of oil off the coast of the West African enclave of Cabinda. It has been predicted that the oil strike will make Portugal self-sufficient in oil by 1970. The Cabinda Gulf Oil Company, a subsidiary of the American Gulf Oil Corporation, is developing the discovery. It was estimated that production, scheduled to begin in 1968 at the rate of 1.5 million tons a year, would increase to 7.5 million tons a year by 1971.

Although the end of 1966 was marked by a raid against the rebels in Angola on Christmas Day, Portugal entered its seventh inconclusive year of African warfare with new economic stresses at home. An expeditionary army of 120,000 men has to be maintained in Portuguese Africa. On March 16, Portugal's foreign minister, Alberto Franco Nogueira, declared that life in Angola had returned to normal and that the terrorists no longer controlled a single area there. Yet civilian priorities have been sacrificed to meet the military requirements, and it appears that the conflict will continue indefinitely.

Pressures in Africa appear to decrease as the guerrillas fail to achieve their objectives. Such landlocked countries as Malawi and Zambia depend on transit facilities through the Portuguese territory of Mozambique and Angola for their trade. Portugal and Malawi are cooperating in the construction of their rail systems, and Malawi may participate in the hydroelectric project the Portuguese are planning on the Zambezi River.

One problem confronting the Portuguese government is that of finding settlers for its African territories. One plan proposes the settlement of 500,000 persons on the Huíla plateau of Angola, which has excellent possibilities for ranching. The Cunene River program involves both Angola and South West Africa and provides very attractive conditions for settlers. The Cabora-Bassa hydroelectric plan for the Zambezi Valley will provide 4 million acres of irrigated land for colonization and the planting of forests. An unsuccessful attempt has been made to induce military veterans to settle in Africa.

Portugal has been grimly clinging to the colony of Macao on the south coast of China, despite Chinese harassment. A crisis provoked by riots early in December 1966 came to an end when, on Jan. 29, 1967, the Portuguese governor agreed to Chinese demands. By that time many Chinese and Portuguese residents had fled from Macao to the British colony of Hong Kong. On February 1 the Portuguese government assured Peking that Macao would in no way be used against Communist China's security. The anti-British campaign in Hong Kong also spilled over into neighboring Macao. Demonstrations and the harassment of diplomatic personnel caused the British to close their consulate there on March 28. Later, on June 1, the U. S. consul advised U. S. citizens to leave Macao because it was no longer safe for them to reside there.

International Affairs. An international problem was raised on February 3 when Portugal asked the United Nations for a $28 million indemnity for losses suffered from the economic sanctions imposed on Rhodesia in 1966. The embargo affected ports, railways, and the Beira-Umtali pipeline in Mozambique, the principal gateway to Rhodesia. The Portuguese also challenge the validity of the ban on specific Rhodesian exports and imports.

On November 15 the UN Security Council censured Portugal for allowing mercenaries to use its African territory of Angola as a base for operations against the Congo. The Portuguese protested, but did admit that mercenaries fleeing from the Congo had taken refuge in Angola.

RHEA MARSH SMITH
Rollins College

POST OFFICE

In April 1967, Postmaster General Lawrence F. O'Brien proposed that the Post Office Department be abolished as a cabinet agency and be replaced by a government corporation. Plans were announced for a $16.5 million post office laboratory complex in Fairfax county, Va., to test systems of post office mechanization. Parcel post service was extended.

Proposed New Postal Organization. According to the postmaster general's proposal, the new government corporation replacing the Post Office Department would be operated by a board of directors appointed by the president and confirmed by Congress. The corporation would provide postal services authorized by Congress. The suggestion is being studied.

Zip Codes. Presorting by Zip Code became mandatory on Jan. 1, 1967, for all second- and third-class bulk mail. Well over half the general public was using Zip Codes by the end of fiscal year 1967.

New Rates. Rate increases averaging 13% went into effect on May 1, 1967, on international surface and airmail. On Jan. 15, 1967, an average increase of 10¢ per parcel for parcel post became effective. Postal rates, effective Jan. 7, 1968, were increased from 5¢ to 6¢ for regular first-class letters and from 8¢ to 10¢ for airmail. Postal cards were increased from 4¢ to 5¢ for regular cards and from 6¢ to 8¢ for airmail. The postal savings system, begun in 1911, came to an end at midnight, June 30.

Operations. Gross revenues and reimbursements from all sources during the 1967 fiscal year totaled $5,113,587,000 (not including agency payments). Net revenue amounted to $4,962,702,128, representing an increase of 6% over 1966.

Mail volume processed during the year increased 4.7% to a total of 79.2 billion pieces. Special service transactions such as money orders, registered and certified mail, and COD charges numbered 602 million, a slight increase over 1966.

As of June 30, 1967, there were 32,626 post offices and an additional 11,524 branches and other stations in the United States. The department paid 716,603 workers, more civilian personnel than any other nonmilitary federal department.

Railway post offices covered approximately 75.3 million miles in the fiscal year 1967 and U. S. flag carriers moved 799.3 million ton-miles of domestic and international mail by air.

Convictions for violations of postal statutes in the fiscal year 1967 totaled 11,041.

IRA KAPENSTEIN
Special Assistant to the Postmaster General

POVERTY. See ANTI-POVERTY PROGRAM.
POWELL, Adam Clayton, Jr. See UNITED STATES.
POWER, Electric. See ELECTRICAL INDUSTRIES.

PRESBYTERIAN CHURCHES

Presbyterianism was represented in the United States by ten denominations in 1967. These are the United Presbyterian Church in the United States of America; Presbyterian Church in the United States; Cumberland Presbyterian Church; Associate Reformed Presbyterian Church; Reformed Presbyterian Church, Evangelical Synod; Orthodox Presbyterian Church; Faith Bible Presbyterian Church; Second Cumberland Presbyterian Church; Reformed Presbyterian Church of North America; and the Associate Presbyterian Church of North America.

The United Presbyterian Church in the U. S. A. met May 18–24, 1967, in Portland, Ore., for its 179th General Assembly convocation. Eugene Smathers of Big Lick, Tenn., was elected moderator of the General Assembly. The General Assembly divided the church's "constitution" into two parts, *The Book of Order* and the newly adopted *Book of Confessions*. The *Book of Confessions* establishes as the doctrinal standards of the denomination the Nicene Creed, the Apostles Creed, the Scots Confession, the Heidelberg Catechism, the Second Helvetic Confession, the Westminster Confession of Faith, the Westminster Shorter Catechism, the Theological Declaration of Barmen, and the Confession of 1967. The Westminster Larger Catechism was deleted from the Church's standards.

PRESBYTERIAN CHURCH STATISTICS

Church	Ministers	Churches	Members
Associate Presbyterian Church of North America	3	4	300
Associate Reformed Presbyterian Church	131	143	27,758
Cumberland Presbyterian Church	743	955	88,248
Faith Bible Presbyterian Church	100	80	8,000
Orthodox Presbyterian Church	154	106	8,789
Presbyterian Church in the U.S.	4,220	4,002	951,182
Reformed Presbyterian Church, Evangelical Synod	256	118	9,757
Reformed Presbyterian Church of North America	95	69	5,535
Second Cumberland Presbyterian Church[1]	120	141	7,500
United Presbyterian Church in the U.S.A.	12,874	9,002	3,298,583

[1] 1966 statistics.

There were reactions both for and against the new *Book of Confessions* by other Presbyterian groups. The Presbyterian Church in the U. S. commended it, but several groups rejected it.

The 107th General Assembly of the Presbyterian Church in the U. S., meeting in Bristol, Tenn., elected Marshall C. Dendy as its moderator. Dr. Dendy is the executive secretary of the Board of Christian Education, Richmond, Va.

At its General Assembly in Paducah, Ky., the Cumberland Presbyterian Church extended its efforts to reunite with the Second Cumberland Presbyterian Church.

GERALD W. GILLETTE
Presbyterian Historical Society

PRESTON, Robert. See THEATER.

PRINCE EDWARD ISLAND

Prince Edward Islanders participated in national centennial celebrations throughout 1967, involving both cultural and athletic events. The fourth summer arts festival in Charlottetown's Confederation Centre drew artists from all parts of Canada.

Causeway. The projected 9-mile causeway between Prince Edward Island and New Brunswick on the Canadian mainland became the subject of controversy in 1967. The cost, which revised estimates placed between $150 and $400 million, and certain technical problems—tides, iceflow, and the possible construction of a railroad on the causeway—delayed construction on the new roadway, although the approaches to it are almost completed.

Industry. Business in general in the province was good in 1967 and, despite the appeal of Expo 67 in Montreal, tourists continued to frequent the island. However, a previous rise in construction leveled off, and the Gulf Garden Foods and Bathurst Marine companies, which directed Georgetown food processing and shipbuilding operations, were declared bankrupt and closed down for a time.

Agriculture. There was a lowering of revenues in 1967 from potatoes, the province's principal crop. Although it was a good crop year, competition from bumper crops in other potato producing areas caused a drop in prices. Total farm cash income for the preceding year was $36,561,000. The principal sources of income were potatoes, $11,978,000; dairy products, $5,330,000; and cattle, $6,959,000.

Welfare. For the fiscal year that ended March 31, 1967, the Canadian government paid $8,207,258 in old age security pensions to Island recipients.

FRANK MACKINNON
Prince of Wales College, Charlottetown, P. E. I.

PRINCE EDWARD ISLAND • Information Highlights

Area: 2,184 square miles (5,656 sq km).
Population: 108,535 (1966 census).
Chief Cities (1966 census): Charlottetown, the capital, 18,427; Summerside, 10,042.
Government: *Chief Officers*—lt. gov., Willibald J. MacDonald; premier and atty. gen., Alexander B. Campbell (Liberal); prov. treas. and prov. secy., T. Earle Hickey (L); min. of educ., Gordon L. Bennett (L); chief justice, Thane A. Campbell. *Legislature*—Legislative Assembly, 32 members (17 Liberal, 15 Progressive Conservative).
Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 27,787 pupils (1,166 teachers); private schools, 497 pupils (22 teachers); Indian (federal) schools, 43 pupils (2 teachers); college and university (fall 1967), 1,370 students. *Public school expenditures* (1964–65)—$5,781,830; average teacher's salary (est.) $3,573.
Public Finance (fiscal year 1967 est.): *Revenues*, $30,890,000 (chiefly, sales tax, $7,800,000; income tax, $2,554,000; federal funds, $11,522,000). *Expenditures*, $30,720,000 (chiefly, education, $6,810,000; health and social welfare, $5,840,000; transport and communications, $7,830,000).
Personal Income (1966 est.): $150,000,000; average annual income per person, $1,376.
Public Assistance (fiscal year 1967 est.): $1,930,000 (aged and blind, $1,050,000; dependents and unemployed, $590,000).
Labor Force (industrial employees only, 1966 est.): 13,300 persons.
Manufacturing (1964): Value added by manufacture, $11,964,000 (transportation equipment, $688,000; wood industries, $341,000; food and beverages, $8,538,000).
Agriculture (1966 est.): *Cash farm income*, $36,561,000 (livestock, $20,990,000; crops, $14,169,000; govt. payments, $1,091,000). *Chief crops* (cash receipts)—potatoes, $11,978,000 (ranks 3d among the provinces); vegetables, $1,092,000; fruits, $326,000; oats, $106,000.
Mining (1966 est.): *Production value*, $871,288. *Chief minerals* (short tons)—sand and gravel, 406,636; stone, 200,000.
Fisheries (1966): *Commercial catch*, 58,124,000 pounds ($6,004,000). *Leading species*—lobsters, 7,855,000 pounds ($3,926,000); cod, 10,820,000 pounds ($534,000); oysters, 2,070,000 pounds ($365,000).
Transportation: *Roads* (1965), 3,422 miles (5,506 km); *motor vehicles* (1965), 33,849; *railroads* (1966), 279 track miles (449 km); *licensed airports* (1966), 2.
Communications: *Telephones* (1965), 26,484; *television stations* (1967), 1; *radio stations* (1966), 2.

PRISONS

The major emphasis in rehabilitation of offenders in the United States is being directed toward developing alternatives to imprisonment. Research demonstrates that many offenders can be handled in their communities under specialized programs providing intensive guidance and supervision. These programs are generally less costly than incarceration in an institution and far more effective. Among the most promising have been the establishment of community treatment, work-release, and half-way-house programs designed to assist offenders in becoming reestablished in the community.

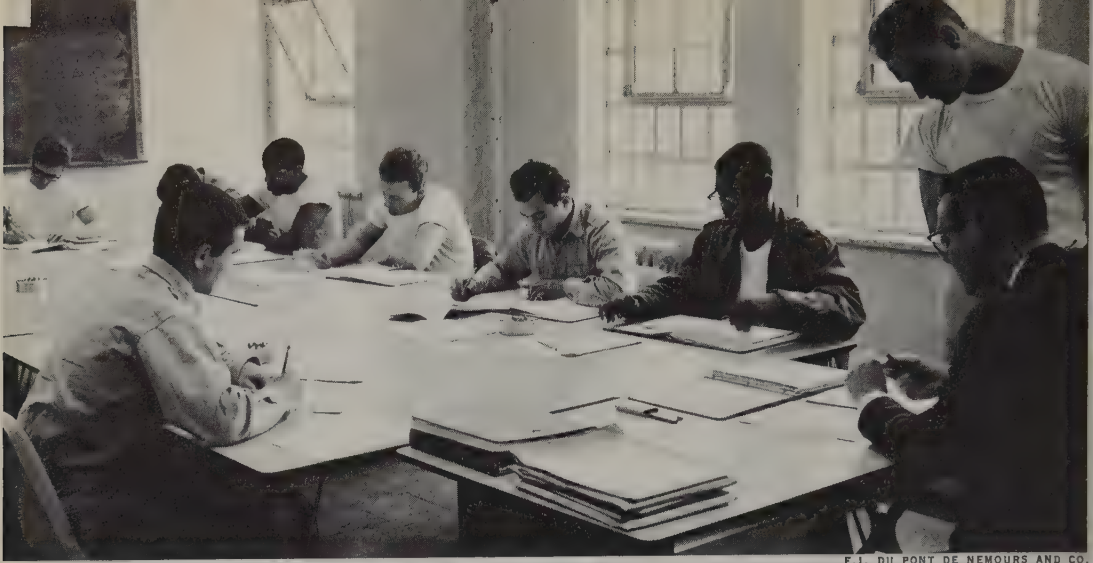
Work Release. In work-release programs, offenders who have done well in institutional programs are placed in community employment prior to release from custody. By late 1967 the federal government and 24 states were operating work-release programs. Work-release statutes were enacted for the first time by 11 states during 1966.

Parole and Probation. Newly developed programs of probation and parole supervision were implemented in 1967. In two California counties, for instance, the case loads for some probation officers were greatly reduced so that they could devote more attention to their juvenile charges. The supervision methods were tailored to meet the individual needs of each youngster. These included personal and

BUREAU OF PRISONS INSTITUTIONS

Type of Institution	Population Oct. 20, 1966	Population Nov. 16, 1967
Penitentiaries:		
Atlanta, Ga.	2,090	2,154
Leavenworth, Kans.	2,059	2,136
Lewisburg, Pa.	1,365	1,381
Marion, Ill.	469	516
McNeil Island, Wash.	951	919
Terre Haute, Ind.	1,148	1,270
Reformatories:		
Alderson, W. Va. (women)	395	417
Chillicothe, Ohio[1]	150	...
El Reno, Okla.	986	939
Lompoc, Calif.	1,030	1,148
Petersburg, Va.	552	562
Juvenile and youth institutions:		
Ashland, Ky.	488	517
Englewood, Colo.	293	279
National Training School for Boys, Washington, D.C.	214	174
Tucson, Ariz.[2]	91	...
Prerelease guidance centers:		
New York, N.Y.[3]	23	...
Chicago, Ill.	20	26
Detroit, Mich.	26	27
Los Angeles, Calif.	19	30
Washington, D.C.[4]	22	...
Kansas City, Mo.	18	17
Atlanta, Ga.[5]	...	14
Houston, Texas[6]	...	24
Oakland, Calif.[7]	...	19
Correctional institutions:		
Danbury, Conn.	698	574
La Tuna, Tex.	562	659
Milan, Mich.	498	599
Sandstone, Minn.	409	426
Seagoville, Texas	402	394
Tallahassee, Fla.	506	503
Terminal Island (men), Calif.	712	693
Terminal Island (women), Calif.	189	155
Texarkana, Tex.	453	544
Prison camps:		
Allenwood, Pa.	254	227
Eglin Air Force Base, Fla.	227	310
Florence, Ariz.	208	8
McNeil Island, Wash.	205	177
Montgomery, Ala.	222	225
Safford, Ariz.	156	240
Detention centers:		
Florence, Ariz.	75	63
New York, N.Y.	243	267
Medical centers:		
Hospital, Springfield, Mo.	730	682
Maintenance unit, Springfield, Mo.	139	205

[1] Closed Dec. 1, 1966. [2] Closed Feb. 7, 1967. [3] Closed June 22, 1967. [4] Closed July 1, 1967. [5] Opened May 25, 1967. [6] Opened May 5, 1967. [7] Opened June 29, 1967. (Source: U.S. Bureau of Prisons.)



E.I. DU PONT DE NEMOURS AND CO.

WELDING WORKS

E.I. DU PONT DE NEMOURS AND CO.

CLASSROOM INSTRUCTION (*above*) and on-the-job training (*left*) are offered prisoners in the Federal Reformatory in Petersburg, Va., as part of a newly developed program to prepare them for their release with skills and guidance.

group counseling, family therapy, and the use of group homes. A follow-up study of five years revealed that the rehabilitation of youths placed in this program was more successful than of juvenile offenders committed to institutions.

In Royal Oak, Mich., a group of citizen volunteers was formed to serve as probation officers for those convicted of misdemeanors. The results of the project indicate that properly trained and supervised citizens can effectively assist courts in rehabilitating certain types of offenders.

Capital Punishment. Only one person was executed by civil authorities in the United States during 1966. This was the lowest number recorded since the Federal Bureau of Prisons began collecting statistics in 1930. In 1965, 7 persons were executed. The death penalty has been abolished in 13 states.

Educational Programs. A number of specialized educational programs have been developed in correctional institutions. At the Draper Youth Center in Alabama, inmates who progress well in their studies are enlisted in a service corps to help other inmates and to develop programs for other offenders. At the National Training School in Washington, D. C., a pilot project has been developed using programmed instruction and providing motivational techniques designed to reward inmates for succeeding in the school program. These new educational techniques have proved to be more effective in reaching offenders than traditional methods of instruction.

Model Jail. Westchester County, N. Y., completed a new county jail for women early in 1967 at Eastview, N. Y. It looks like a school outside and like a motel inside. Instead of cells there are colorful rooms that have no bars at the windows, but jalousies that open on a view of woods and fields. These rooms are furnished with desks, bookshelves, wardrobes, comfortable beds, and radios. Crafts, education, and reading are encouraged. Many citizens helped to design the jail and its programs.

Crime Commission Survey. According to information compiled in the President's Commission on Law Enforcement and Administration of Justice, there are nearly 1.3 million persons in the correctional system on an average day. Of this number, one third (426,000) are confined in institutions; the remaining two thirds (875,000) are under parole or probation supervision in the community. Of all offenders, 95% are male. Most are young, ranging in age from 15 to 30. Nearly a third of all offenders are juveniles. Of all offenders confined in institutions, over 98% eventually will be released to the community either at the expiration of sentence or on parole.

The majority of offenders come from urban slum areas, and members of minority groups are present in disproportionate numbers. Although the level of intelligence of offenders follows the same distribution curve as the national population, the level of educational achievement lags more than five years behind that of the general population. For the majority of inmates, especially the younger offenders, the educational deficiency is accompanied by an even more serious lack of vocational skills.

More than 60% of all offenders released from correctional institutions become involved in further criminal activity. The endless treadmill of arrest, imprisonment, release, and rearrest contributes to the problems of crime and delinquency in the United States.

(See also CRIME.)

MYRL E. ALEXANDER
Director, U. S. Bureau of Prisons

WIDE WORLD WIDE WORLD UPI

PULITZER PRIZE WINNERS of 1967 included Leon Kirchner (*left*), who won the prize in music; Anne Sexton (*center*), who received the poetry prize; and Justin Kaplan, (*right*) who won the prize in biography for his book on Mark Twain.

PRIZES AND AWARDS

The number of prizes and awards continued to increase in 1967 as prize committees strove to honor individual achievement in a wide range of professions in all parts of the world. Recipients of awards announced during the year included President Lyndon B. Johnson, who won the American College of Cardiology's distinguished service medal for his contribution to health in the United States, and Gilberto Freyre, a Brazilian scholar, who won the $30,000 Aspen Award for his "outstanding contribution to the humanities."

The National Book Committee and the Pulitzer Prize committe added new annual awards to their prize lists. In March the National Book Committee named winners in two new categories: translation of a classic work and translation of a modern work. Columbia University announced in December that a Pulitzer Prize for feature photography would be awarded in 1968 as well as the long-established news photography citation. For the first time in several years, an award was made in each of the Pulitzer categories.

The Atoms for Peace Award was presented for the first time since 1963. The $90,000 award, administered by a board of prominent Americans, was to have been equally divided between four men, but Vasily S. Yemelyanov, the chairman of the Soviet Administration for the Peaceful Uses of Atomic Energy, rejected the honor in protest against the war in Vietnam.

A selected list of the most important and newsworthy prizes and awards announced in 1967 follows.

PULITZER PRIZES

Winners of the Pulitzer Prizes were announced by the trustees of Columbia University on May 1, 1967. A controversy was stirred up when it was learned that the Pulitzer Prize advisory board had rejected a journalism jury's recommendation that the international reporting award be given to Harrison E. Salisbury of the New York *Times* for his dispatches from North Vietnam.

Journalism. Gold medals for meritorious public service rendered by a U. S. newspaper—Louisville (Ky.) *Courier-Journal,* for its campaign to control the Kentucky strip-mining industry, and the Milwaukee (Wis.) *Journal,* for its campaign to stiffen the state water pollution laws. International reporting—R. John Hughes of the *Christian Science Monitor,* for reports from Indonesia. National reporting—Stanley W. Penn and Monroe W. Karmin of the *Wall Street Journal,* for reports exposing the link between U. S. crime and gambling in the Bahamas. General local reporting—Robert V. Cox of the Chambersburg (Pa.) *Public Opinion,* for his coverage of a mountain manhunt. Special local reporting—Gene Miller of the Miami (Fla.) *Herald,* for reporting that resulted in the release of two men wrongly convicted of murder. Editorial writing—Eugene C. Patterson of the Atlanta (Ga.) *Constitution.* Editorial cartoons—Patrick B. Oliphant of the Denver (Colo.) *Post.* News photography—Jack R. Thornell of the Associated Press' New Orleans bureau, for his picture of the shooting of James H. Meredith near Hernando, Miss., on June 6, 1966.

Letters. History—William H. Goetzmann, for *Exploration and Empire;* biography—Justin Kaplan, for *Mr. Clemens and Mark Twain;* poetry—Anne Sexton, for *Live or Die;* fiction—Bernard Malamud, for *The Fixer;* nonfiction—David Brion Davis, for *The Problem of Slavery in Western Culture;* drama—Edward Albee, for *A Delicate Balance.*

Music. Leon Kirchner, for his Quartet No. 3.

All journalism awards, with the exception of the medals for public service, carry stipends of $1,000. Literary prizes and the music prize are $500 each.

ARTS

American Composers Alliance, Laurel Leaf Awards for "distinguished service to contemporary music"—the Composers Forum, the Fromm Music Foundation, and radio station WBAI-FM.

American Institute of Architects awards: Fine Arts Medal—Constantino Nivola, sculptor; Gold Medal—Wallace K. Harrison, architect.

American Institute of Graphic Arts Gold Medal—Romana Javitz, curator of the New York Public Library picture collection.

Aspen Institute for Humanistic Studies, R. O. Anderson Award in the humanities ($30,000)—Gilberto Freyre.

Brandeis University creative arts awards ($1,000)—Kenneth Burke, literary critic; Ludwig Mies van der Rohe and Kevin Roche, architects; Ross Lee Finney and Claudio Spies, composers; Conrad Aiken and May Swenson, poets; Ellen Stewart, producer; Jerome Robbins, director and choreographer.

Capezio Dance Award ($1,000)—Paul Taylor.

Dag Hammarskjöld International Prize in the arts—Leonard Bernstein, music director of the New York Philharmonic.

Guggenheim International Awards in sculpture—Günter Haise of Germany, Aiko Miyawaki of Japan, Robert Morris of the United States, and Eduardo Paolozzi of Britain.

Lenin Peace Prizes in the arts (10,000 rubles, or about $11,000)—Yuri Pimenov, Ruben Simonov, Mikhail Svetlov, Kara Karayev, and Igor Moiseyev.

Leventritt International Violin Competition ($1,000)—Pinchas Zuckerman of Israel and Kyung Whachung of Korea.

Dimitri Mitropoulos International Music Competition awards ($5,000)—Enrique García-Asensio, Helen Quach, Alois Springer, and Paul Capolongo, conductors.

National Academy of Design, Benjamin Altman Awards—William Thon, Isabel Bishop, Paul W. Zimmerman, and Mary Fife, painters.

National Federation of Music Clubs, Anne Gannet Awards—Wesley C. Flinn, baritone ($500); Bruce James Headlee, composer ($200); international music scholarship ($2,000)—Jay Thompson.

National Institute of Arts and Letters awards ($2,500): art—Byron Burford, Jared French, Stephen Greene, Leo Kenney, Dennis Leon, Hugh Townley, and Louis Tytell; music—George H. Crumb, Donald Martino, Julian Orbon, and Charles Wuorinen; Marjorie Peabody Waite Award ($1,500)—Stringfellow Barr; Richard and Hinda Rosenthal Foundation Award ($2,000)—Richard D'Arista, painter; Merit Award in painting ($1,000)—John Heliker.

R. S. Reynolds Memorial Award for "architectural use of aluminum" administered by the American Institute of Architects ($25,000)—Victor F. Christ-Janer.

JOURNALISM

American Newspaper Guild Heywood Broun Memorial Award ($1,000)—Gene Miller of the Miami (Fla.) *Herald.*

Maria Moors Cabot Gold Medals for "distinguished journalistic contributions to the advancement of international friendship and understanding in the Americas ($1,000)—Peter Aldor, cartoonist of *El Tiempo* of Bogotá, Colombia; James S. Copley, chairman of the Copley Press, La Jolla, Calif.; James Nelson Goodsell, Latin American editor of the *Christian Science Monitor;* M. F. do Nascimento Brito, executive director of *Jornal do Brasil,* Rio de Janeiro, Brazil; and Ramon José Velasquez Mujica, director of *El Nacional* of Caracas, Venezuela.

Sidney Hillman Foundation Awards for achievement in the communications field ($500)—Harrison E. Salisbury, William Jersey, Joseph P. Lyford, Richard Harris, Douglas S. Walker, and Robert A. Keveney.

WIDE WORLD

ROY WILKINS (*left*) accepts the Freedom Award of 1967 from Secretary of State Dean Rusk at a public ceremony.

Albert Lasker Medical Journalism Awards ($2,500): newspaper—Barbara Yuncker of the New York *Post,* for the series entitled *The Pill;* magazine writing—Lawrence Lessing of *Fortune* magazine, for the series *The Biology Revolution;* television—Station WABC-TV, for *The Long Childhood of Timmy* and WXYZ-TV, for *End Measles Sunday;* special award—Albert Rosenfeld of *Life* magazine.

Long Island University, George Polk Memorial Awards for 1966: foreign reporting—Harrison E. Salisbury of the New York *Times;* national reporting—Richard Harwood of the Washington (D. C.) *Post;* local reporting—Cal Olson of the Fargo (N. D.) *Forum:* interpretive reporting—Murray Kempton of the New York *Post;* criticism—Alfred Kazin; magazine reporting—*Ramparts* magazine; book—Wilson Follett, for *Modern American Usage;* news photography—Horst Fass of the Associated Press; special awards—Arnold Gingrich, publisher of *Esquire* magazine and "Time Essay" in *Time* magazine.

George Jean Nathan Drama Criticism Award ($4,000)—Elizabeth Hardwick, drama critic of the *New York Review of Books.*

Overseas Press Club Awards for 1966: George Polk Memorial Award—Ron Nessen and crew of NBC News, for the best reporting "requiring exceptional courage and enterprise in an overseas assignment"; interpretation of foreign affairs for a newspaper or wire service—Robert S. Elegant of the Los Angeles *Times;* interpretation of foreign affairs in television—Howard K. Smith of ABC News; interpretation of foreign affairs in radio—NBC News; interpretation of foreign affairs in magazines—Eric Sevareid, for articles in *Look* magazine; daily newspaper or wire service reporting from abroad—Hugh Mulligan of the Associated Press; daily newspaper or wire service photographic reporting from abroad—Kyoichi Sawada of United Press International; radio reporting from abroad—Sam Jaffe of ABC News; television reporting from abroad—Morley Safer of CBS News; magazine reporting from abroad—Sybille Bedford for an article in the *Saturday Evening Post;* book on foreign affairs—Welles Hagen, for *The Muted Revolution;* Robert Capa Award for photography—Henri Huet of the Associated Press; Ed Stout Award for Latin American reporting—Georgie Anne Geyer of the Chicago (Ill.) *Daily News;* E. W. Fairchild Award for business news reporting from abroad—Lawrence Malkin of the Associated Press; *Asia* Magazine Award for reporting in any medium in Asia—Harrison E. Salisbury of the New York *Times;* special award for outstanding journalistic achievement—the late Henry Luce.

LITERATURE

Academy of American Poets Fellowship Award ($5,000)—John Berryman.

American Library Association awards: Newbery Medal—Irene Hunt, for *Up a Road Slowly;* Caldecott Medal—Evaline Ness, for *Sam, Bangs & Moonshine;* Isadore Gilbert Mudge Citation—Louis Shores, former dean of the Florida State University Library School; Beta Phi Mu Award—Louis Shores; Francis Joseph Campbell Award—Kenneth Jernigan, director of the Iowa Commission for the Blind; Joseph W. Lippincott Award ($1,000)—Edmon Low, librarian of Oklahoma State University Library; Grolier Award—Lura E. Crawford, director of Library Services at Oak Park and River Forest High School in Illinois; Melcher Scholarship for study in the field of library work ($2,000)—Florence L. Willson.

Bancroft Prizes of Columbia University for distinguished writing in American history, diplomacy, and international relations during 1966 ($4,000)—William W. Freehling, for *Prelude to Civil War: The Nullification Controversy in South Carolina, 1816–1836;* James Sterling Young, for *The Washington Community, 1800–1828;* Charles Sellers, for *James K. Polk, Continentalist: 1843–1846.*

Bollingen Foundation, Bollingen Prize in Poetry, administered by Yale University ($5,000)—Robert Penn Warren, for *Selected Poems, New and Old, 1923–1966.*

Carey-Thomas Award for a distinguished project of creative book publishing—George Braziller, Inc., publisher, for the facsimile edition of *The Hours of Catherine of Cleves.*

Goncourt Prize in literature (Prix Goncourt)—André Pieyre de Mandiargues, for *La Marge (The Margin).*

Governor-General's Awards (Canadian) for 1966 ($2,500)—English fiction—Margaret Laurence, for *A Jest of God;* French fiction—Claire Martin, for *La joue droite,* the second volume of her autobiographical work *Dans un gant de fer;* English poetry—Margaret Atwood, for *The Circle Game;* French poetry and drama—Réjean Ducharme, for *L'Avalée des avalés;* English nonfiction—George Woodcock, for *The Crystal Spirit: A Study of George Orwell;* French nonfiction—Marcel Trudel, for *Le Comptoir, 1604–1627,* the second volume of his *Histoire de la Nouvelle France.*

International Prize for Literature ($20,000), for the best unpublished new work of fiction (formerly the Formentor Prize)—Witold Gombrowicz, for *Cosmos.*

Lamont Poetry Prize, sponsored by the Academy of American Poets—James Scully, for *The Marshes.*

Mystery Writers of America, Edgar Allan Poe ("Edgar") awards for 1966: best mystery novel—Nicolas Freeling, for *King of the Rainy Country;* best first mystery novel—Ross Thomas, for *The Cold War Swap;* best fact crime writing—Gerold Frank, for *The Boston Strangler;* best juvenile mystery—Kin Platt, *Sinbad and Me;* best mystery short story—Rhys Davies, for *The Chosen One,* which appeared in *The New Yorker* magazine; best mystery book jacket design—Crowell-Collier, Ballantine, William Morrow, and Crime Club, publishers; best American motion picture mystery—William Goldman, for *Harper;* best television mystery—Jerome Ross, for *Operation Rogesh.*

National Book Awards for 1966 ($1,000): fiction—Bernard Malamud, for *The Fixer;* arts and letters—Justin Kaplan, for *Mr. Clemens and Mark Twain;* poetry—James Merrill, for *Nights and Days;* history and biography—Peter Gay, for *The Enlightenment: An Interpretation;* science, philosophy, and religion—Oscar Lewis, for *La Vida;* translation of a classic work—Willard Trask, for his translation of *History of My Life* by Giacomo Casanova; translation of a contemporary work—Gregory Rabassa, for his translation of *Hopscotch* by Julio Cortázar.

National Book Committee, National Medal for Literature ($5,000)—W. H. Auden.

National Endowment for the Arts awards ($10,000)—Malcolm Cowley, Kenneth Patchen, Louise Bogan, Yvor Winters, John Crowe Ransom, poet-critics.

National Institute of Arts and Letters Gold Medal for fiction—Katherine Anne Porter.

National Institute of Arts and Letters Gold Medal for history and biography—Arthur M. Schlesinger, Jr.

National Institute of Arts and Letters awards ($2,500): writing—Philip Booth, Hortense Calisher, Daniel Hoffman, Stanley Edgar Hyman, Bernard M. W. Knox, Walter Percy, and David Wagoner; Richard and Hinda Rosenthal Foundation Award ($2,000)—Thomas Pynchon, for his novel *The Crying of Lot 49.*

P. E. N. American Center Translation Award ($1,000)—Harriet de Onis, for her translation from the Portuguese of João Guilmaraes Rosa's *Sagarana.*

Poetry Society of America Awards: Gold Medal for distinguished achievement—Marianne Moore; Shelley Memorial Award ($1,475)—Anne Sexton; Alice Fay de Castagnola Award in fiction for a collection of poems still in progress ($3,500)—Gustav Davidson; Melville Cane Award ($500)—Lawrence Thompson.

Science Fiction Writers of America Nebula Awards for 1966: best novels—Samuel R. Delany, for *Babel-17,* and Daniel Keyes, for *Flowers for Algernon;* best novella—Jack Vance, for *The Last Castle;* best novelette—Gordon R. Dickson, for *Call Him Lord;* best short story—Richard McKenna, for *The Secret Place.*

PUBLIC SERVICE

American Council for Nationalities Service, Golden Door Award to a foreign-born citizen who makes an outstanding contribution to American life and culture—Frederic O. Hess, industrialist and inventor.

American Friends of the Hebrew University, Scopus Award—Abraham F. Wechsler, businessman and philanthropist.

Anisfield-Wolf Awards for the best scholarly work concerned with the problem of intergroup relations ($1,500)—Oscar Lewis, for *La Vida;* David Brion Davis, for *The Problem of Slavery in Western Culture.*

Anti-Defamation League of B'nai B'rith Human Rights Award—former Sen. Paul H. Douglas and his wife, Emily Taft Douglas.

Albert Einstein Commemorative Award in philanthropy, administered by the Albert Einstein College of Medicine of Yeshiva University—Sir Isaac Wolfson, British financier.

Albert Lasker Public Service Award ($10,000)—Rep. Claude Pepper of Florida, for his interest in medical legislation over 30 years in both houses of Congress.

Four Freedoms Foundation Award—Arthur J. Goldberg, chief U. S. representative at the United Nations, for his "distinguished service in the cause of freedom."

Freedom Foundation awards: George Washington Award—Pfc. Hiram D. Strickland, killed in Vietnam (posthumously); National Service Medal—Bob Hope; Freedom Leadership Medal—Milton Caniff, cartoonist.

Freedom House, Freedom Award for 1967: Roy Wilkins, executive director of the National Association for the Advancement of Colored People.

Dag Hammarskjöld Cultural Prize—Clare Boothe Luce, former ambassador to Italy.

New York Civil Liberties Union, Florina Lasker Civil Liberties award ($1,000)—Alan Barth of the New York *Post.*

Rockefeller Public Service Awards for outstanding long-term service to the federal government ($10,000): administration—Donald A. Williams, director of the soil conservation service, department of agriculture; foreign affairs—Foy D. Kohler, deputy undersecretary for political affairs; general welfare—Wilbur J. Cohen, undersecretary for health, education, and welfare; law, legislation, or regulation—Phillip Elman, member of the federal trade commission; science, technology, or engineering—Herbert Friedman, superintendent of the atmosphere and astrophysics division and chief scientist, Hulburt Center for Space Research, Naval Research Laboratory.

RADIO AND TELEVISION

Academy of Television Arts and Sciences ("Emmy") Awards: dramatic program—*Death of a Salesman* (CBS) starring Lee J. Cobb; musical program—*Brigadoon* (NBC); variety special—*The Sid Caesar, Imogene Coca, Carl Reiner, Howard Morris Special* (NBC); dramatic series—*Mission Impossible* (CBS); comedy series—*The Monkees* (NBC); variety series—*The Andy Williams Show* (NBC); single dramatic performances in leading roles—Geraldine Page, in *A Christmas Memory* (ABC); Peter Ustinov, in *Barefoot in Athens* on *Hallmark Hall of Fame* (NBC); performances in a leading role in a dramatic series—Bill Cosby, in *I Spy* (NBC); Barbara Bain, in *Mission Impossible* (CBS); performances in a leading role in a comedy series—Don Adams, in *Get Smart* (NBC); Lucille Ball, in *The Lucy Show* (CBS); supporting performances—Eli Wallach, in *The Poppy Is Also a Flower* (ABC); Agnes Moorhead in *Night of the Vicious Valentine, Wild Wild West* (CBS); Don Knotts, in *Barney Comes to Mayberry, The Andy Griffith Show* (CBS); Francis Bavier, on *The Andy Griffith Show* (CBS); drama direction—Alex Segal, for *Death of a Salesman* (CBS); comedy direction—James Frawley, for *Royal Flush, The Monkees* (NBC); variety direction—Mel Brooks, Sam Denoff, Bill Persky, Carl Reiner, and Mel Tolkin, for *The Sid Caesar, Imogene Coca, Carl Reiner, Howard Morris Special* (NBC); writing, drama—Bruce Geller, for *Mission Impossible* (CBS); dramatic writing, single program—Arthur Miller, for *Death of a Salesman;* writing, comedy—Buck Henry and Leonard Stern, for *Ship of Spies, Get Smart* (NBC); sports achievement—*ABC's Wide World of Sports* (ABC); individual achievement—Truman Capote and Eleanor Perry, for *A Christmas Memory* (ABC); daytime programming—*Mutual of Omaha's Wild Kingdom* (NBC); Mike Douglas, *The Mike Douglas Show* (WOR); children's program—*Jack and the Beanstalk* (NBC).

George Foster Peabody Awards for distinguished achievement in 1966: television—*A Christmas Memory* (ABC); Harry Reasoner, *CBS News* (CBS); *National Geographic Specials* (NBC); *American White Paper: Organized Crime in the United States* (NBC); *The World of Stuart Little,* with Burgess Meredith (NBC); *ABC's Wide World of Sports* (ABC); *Siberia: A Day in Irkutsk* (NBC); *Bell Telephone Hour* (NBC); radio—*Community Opinion,* station WLIB, New York; Edwin Newman, NBC; station WSB, Atlanta, Ga.

SCIENCE AND TECHNOLOGY

Air Force Academy, Thomas D. White National Defense Award for 1967—Lieut. Gen. James H. Doolittle.

American Academy of Arts and Sciences Rumford Premium Award ($5,000)—Cornelis B. van Neil of Stanford University; Robert H. Dicke of Princeton University.

American Chemical Society, Priestley Medal—George W. Beadle of the University of Chicago.

American College of Cardiology Distinguished Service Award—President Lyndon B. Johnson, for his contribution to American health.

American Geographical Society Awards for 1967: Charles P. Daly Medal—Marston Bates of the University of Michigan; Cullum Geographical Medal—Peter Haggett of the University of Bristol, England.

American Institute of Aeronautics and Astronautics (AIAA) Awards: Haley Astronautics Award—Edward H. White II; Octave Chanute Award ($500)—Milton O. Thompson; De Florez Training Award ($500)—Edwin H. Link; Goddard Award ($10,000)—Robert O. Bullock, Irving A. Johnsen, and Seymour Lieblein; Louis W. Hill Space Transportation Award ($5,000)—Abe Silverstein; John Jeffries Award ($200)—Charles I. Barron; AIAA National Student Awards—Peter J. Turchi and J. W. Cipolla, Jr.; G. Edward Pendray Award—Robert A. Gross; Sylvanus Albert Reed Award ($250)—Adolph Busemann; AIAA Research Award ($2,500)—Edward W. Price; AIAA Space Science Award ($1,000)—Robert B. Leighton; Lawrence B. Sperry Award ($250)—Eugene F. Kranz; James H. Wyld Propulsion Award ($500)—Adelbert O. Tischler; Robert M. Losey Award—Elmar R. Reiter.

American Institute of Physics: Karl Taylor Compton Gold Medal—Alan T. Waterman, former president of the National Science Foundation.

American Physics Society: APS Prize ($2,500)—Peter Alden Franken of the University of Michigan; Oliver E. Buckley Solid-State Physics Prize ($1,000)—Harry G. Drickamer; Tom W. Bonner Prize—Charles C. Lauritsen of the California Institute of Technology; Davisson and Germer Prize ($2,500)—H. Richard Crane, University of Michigan.

UNITED NATIONS

VASILY S. YEMELYANOV of the Soviet Union declined the Atoms for Peace Award to protest the war in Vietnam.

Arches of Science Award of the Pacific Science Center, for outstanding contributions to the public understanding of science ($25,000)—James B. Conant.

Atomic Energy Commission Ernest O. Laurence Memorial Awards, for contributions to the development, use, or control of atomic energy ($5,000 each)—Mortimer M. Elkind, Allan F. Henry, Robert N. Thorn, John O. Rasmussen, and John M. Googin.

Atoms for Peace Award ($90,000)—W. Bennett Lewis of Canada, for his work on atomic development; Bertrand L. Goldschmidt of France, a director of the French Atomic Energy Commission; Isidor I. Rabi of the United States, who conceived the first international nuclear research laboratory.

Göttingen Academy of Sciences: Dannie-Hienemann Prize for astronomy ($5,000)—Martin Schwarzchild of Princeton University; Dannie-Hienemann Prize for biology ($5,000)—Gobind Khorana of the University of Wisconsin.

Harmon International Aviation Trophies for 1967—Alvin S. White, test pilot; Edwin E. Aldrin, Jr. and James A. Lovell, Jr., astronauts; Sheila Scott, woman flier.

Louisa Gross Horowitz Prize, administered by Columbia University ($25,000)—Luis F. Leloir of Buenos Aires University, Argentina, for his discovery of metabolically important nucleoside diphosphate sugars.

Irving Langmuir Award for studies in physics ($5,000)—John Clarke Slater, for his contributions in the military use of radar and in the development of the transistor.

Albert Lasker Medical Research Awards ($10,000): clinical research—Robert A. Phillips, for his treatment for cholera; basic research—Bernard B. Brodie, for his contribution to drug research.

National Academy of Sciences: U. S. Steel Foundation Award for research in molecular biology—Robert W. Holly of Cornell University; J. Lawrence Smith Medal for the study of meteoric bodies—John H. Reynolds of the University of California; Daniel Giraud Elliot Medal for a published work in zoology or paleontology—Ernst Mayr of Harvard University, for *Animal Species and Evolution;* Charles Doolittle Walcott Medal—Allison R. Palmer of the State University of New York at Stony Brook; Kimber Genetics Medal—Barbara McClintock of the Carnegie Institution of Washington; Gibbs Brothers Medal—Alfred A. H. Keil of Massachusetts Institute of Technology; Mary Clark Thompson Medal—Wendell Phillips Woodring of the Smithsonian Institution; Founders' Medal—James S. McDonnell of the McDonnell Aircraft Corporation.

National Aeronautics Association: Robert Collier Trophy—James S. McConnell; Wright Brothers Trophy—Igor I. Sikorsky, aeronautical engineer.

National Aeronautics and Space Administration (NASA) exceptional service medal—Roger B. Chaffee, astronaut.

National Medals of Science for 1967: Kenneth S. Cole of the National Institute of Health; Harry F. Harlow, professor of psychology at the University of Wisconsin; Igor I. Sikorsky, retired engineering manager at Sikorsky Aircraft Division of United Aircraft Corporation; Paul J. Cohen, professor of mathematics at Stanford University; Jesse W. Beams, professor of physics at the University of Virginia; Francis Birch, professor of geological sciences at Harvard University; Gregory Breit, professor of physics at Yale University; Louis P. Hammett, retired professor of chemistry at Columbia University; Fred H. Sturdevant, professor emeritus of biology at California Institute of Technology; Michael Heidelberger, professor of immunochemistry at New York University; Edwin H. Land, president of the Polaroid Corporation; George B. Kistiakowsky, professor of chemistry at Harvard University.

Research Corporation Award for 1967 ($5,000 each)—Val L. Fitch and James W. Cronin of Princeton University, for their "fundamental researches into the symmetries of physics and of nature itself."

Smithsonian Institution Langley Medal—Wernher von Braun.

Stouffer Prize for research in arteriosclerosis and hypertension ($12,000 each)—U. S. von Euler of Sweden; Peter Holtz of Germany; J. W. Cornforth and George J. Popjak of Britain.

Addison Emery Verrill Medal for contributions in the field of natural history—George Ledyard Stebbins, professor of genetics at the University of California.

THEATER AND MOTION PICTURES

Academy of Motion Picture Arts and Sciences ("Oscar") Awards for 1966: best film—*A Man for all Seasons;* best foreign-language film—*A Man and a Woman* (France); best actress—Elizabeth Taylor, for her role in *Who's Afraid of Virginia Woolf?;* best actor—Paul Scofield, for his role in *A Man for all Seasons;* best supporting actress—Sandy Dennis, for her role in *Who's Afraid of Virginia Woolf?;* best supporting actor—Walter Matthau, for his role in *The Fortune Cookie;* best director—Fred Zinnemann, for *A Man for all Seasons;* best screenplay based on material from another medium—Robert Bolt, for the adaptation of his play *A Man for all Seasons;* best original screenplay—Pierre Uytterhoeven and Claude Lelouch, for *A Man and a Woman;* best musical score—John Barry, for *Born Free;* best scoring adaptation—Ken Thorne and Melvin Frank, for *A Funny Thing Happened on the Way to the Forum;* best original song—*Born Free* from *Born Free,* by John Barry and Don Black; best art direction, color—Jack Martin Smith and Dale Hennessy, for *Fantastic Voyage;* best art direction, black and white—Richard Sylbert, for *Who's Afraid of Virginia Woolf?;* best cinematography, color—Ted Moore, for *A Man for all Seasons;* best cinematography, black and white—Haskell Wexler, for *Who's Afraid of Virginia Woolf?;* best costume design, black and white—Irene Sharaff, for *Who's Afraid of Virginia Woolf?;* best costume design, color—Elizabeth Haffenden and Joan Bridge, for *A Man for all Seasons;* best special effects—Art Cruickshank, for *Fantastic Voyage;* best sound—Franklin E. Milton, for *Grand Prix;* best sound effects—Gordon Daniel, for *Grand Prix;* best feature documentary—Peter Watkins, for *The War Game;* best short documentary—Edward A. Levy, for *A Year Toward Tomorrow;* best film editing—Fredric Steinkamp, Henry Berman, Stewart Linder, and Frank Santillo, for *Grand Prix;* best live-action short subject—Edgar Anstey, for *Wild Wings;* best cartoon short subject—John and Faith Hubley, for *Herb Alpert and the Tijuana Brass Double Feature;* best set decoration, black and white—George James Hopkins, for *Who's Afraid of Virginia Woolf?;* best set decoration, color—Walter M. Scott and Stuart Reiss, for *Fantastic Voyage;* Irving Thalberg Award—Robert Wise, director.

American Theater Wing, Antoinette Perry ("Tony") Awards for 1966–67: best drama—*The Homecoming,* by Harold Pinter; best musical—*Cabaret,* by Joe Masteroff, John Kander, and Fred Ebb; best musical star and actor—Robert Preston, in *I Do! I Do!;* best dramatic actor—Paul Rogers, in *The Homecoming;* best musical star and actress—Barbara Harris, in *The Apple Tree;* best dramatic actress—Beryl Reid, in *The Killing of Sister George;* best dramatic supporting actress—Marian Seldes, in *A Delicate Balance;* best dramatic supporting actor—Ian Holm, in *The Homecoming;* best musical supporting actress—Peg Murray, in *Cabaret;* best musical supporting actor—Joel Grey, in *Cabaret;* best dramatic director—Peter Hall, for *The Homecoming;* best musical director—Harold Prince, for *Cabaret;* best composer and lyricist—Fred Ebb and John Kander, for *Cabaret;* best scenic designer—Boris Aronson, for *Cabaret;* best costume designer—Patricia Zipprodt, for *Cabaret;* best choreographer—Ronald Field, for *Cabaret.*

Cannes International Film Festival Awards: Gold Palm Grand Prix—*Blow Up* (British; special jury prize—*Accident* (British) and *I Have Even Met Happy Gypsies* (Yugoslav); actress—Pia Degermark, in *Elvira Madigan* (Swedish); actor—Odded Kotler, in *Three Days and a Child* (Israeli).

Drama Desk-Vernon Rice Awards for outstanding achievements in the off-Broadway theater: playwrights—Jean Claude van Italie, for *America Hurrah,* Langford Wilson, *The Rimers of Eldritch;* actors—Bill Hinnannt, for *You're a Good Man, Charlie Brown;* Stacy Keach, for *MacBird;* Dustin Hoffman, for *Eh?;* Will Lee, for *The Deer Park;* director—Joseph Hardy, for *You're a Good Man, Charlie Brown.*

New York Drama Critics Circle Theater Awards for 1966–67: drama—*The Homecoming,* by Harold Pinter; musical—*Cabaret,* by Joe Masteroff, John Kander, and Fred Ebb.

New York Film Critics Awards for 1966–67: best English-language film—*In the Heat of the Night;* best actor—Rod Steiger, in *In the Heat of the Night;* best actress—Dame Edith Evans, in *The Whisperers;* best director—Mike Nichols, for *The Graduate;* best screenplay—David Newman and Robert Benton, for *Bonnie and Clyde;* best foreign-language film—*La Guerre est Finie* (French).

Venice International Film Festival awards: Golden Lion of St. Mark for the best film—*Belle de Jour* (French), directed by Luis Buñuel; best actress—Shirley Knight, in *Dutchman* (American); best actor—Ljubisa Samardzic, in *Jutro* (Yugoslav); special jury prizes—*China is Near* (*Italian*), directed by Marco Bellocchio, and *La Chinoise* (French), directed by Jean-Luc Godard.

PROTESTANTISM. See Religion.

PSYCHIATRY. See Mental Health.

PSYCHOLOGY

The activities of the 75th annual convention of the American Psychological Association (APA), held in Washington, D. C., on Sept. 1–5, 1967, mirrored the major interests of psychologists during the year.

APA Meeting. The outgoing president, Gardner Lindzey of the University of Texas, gave an address showing the relevance of incest and the incest taboo to race, social, and international relationships. Recipients of the Distinguished Scientific Contribution awards for 1966 read the following papers: Nancy Bayley on "Behavioral Correlates of Mental Growth: Birth to Thirty-Six Years"; Clarence H. Graham on "Depth and Movement" (describing research on vision); and Richard L. Solomon on "Some Interactions between Pavlovian Conditioning and Instrumental Performance."

The corresponding awards for 1967 were given to Solomon E. Asch, who has worked primarily in social psychology and personality; to Ernest R. Hilgard, a generalist who has recently been concerned with problems of awareness; and to James Olds, a specialist in brain functions.

Abraham H. Maslow of Brandeis University, who is distinguished for studies of self-actualization and creativity, became president of the APA, and George A. Miller of Harvard University, whose research has been on cognition, president-elect.

Two new divisions of the APA, community psychology and psychopharmacology, participated in the convention. Sessions on community psychology discussed issues such as community participation in setting up mental health centers, the problems of training community psychologists and assessing their work, and special problems of ghetto areas. Sessions on psychopharmacology reported research findings, particularly on addiction and on the relation of acetylcholine and brain amines to behavior. There is growing interest in forming two additional divisions, one in psychological hypnosis and the other in (Freudian) psychoanalysis.

Research. An increasing volume of research is being reported in neural functioning and in the closely related field of conditioning. Both are areas in which Soviet psychologists are also doing distinguished work. In the United States there is strong interest in the methodological problems of measurement and of test evaluation. Findings are critically applied to the data of industrial and social psychology and of personality studies. In clinical psychology the research emphasis is on case reports and surveys and on developing new methods for effective psychotherapy and work in mental health.

Professional Concerns. The large and sympathetic audience of Dr. Martin Luther King, Jr., at the annual APA convention reflected psychologists' strong concern with social issues. Ethical problems of psychological research are increasingly being discussed, especially as they apply to government and interdisciplinary work.

Publications. Psychological journals and books continue to multiply. *Psychological Abstracts* regularly examines more than 400 journals, and *Contemporary Psychology* receives more than 1,000 books annually for review.

Gertrude R. Schmeidler
City College, City University of New York

PUBLIC ASSISTANCE. See Anti-Poverty Program; Child Welfare; Old Age; Social Security.

PUBLIC HEALTH

Heartening progress was achieved in public health in the United States in 1966. States were engaged in establishing comprehensive health-planning programs, aided by federal grants authorized by the Partnership for Health Act of 1966. The planning is a means through which each state can determine health needs and set priorities for action.

Another federal program initiated in the 1967 fiscal year provided further support for development of manpower in the field of public health. In that program $3.2 million was awarded to 192 training centers in colleges, universities, and junior colleges to improve training programs in the allied health professions. Traineeships and projects to develop curricula for training new types of health workers were also supported.

Nearly 500 of the 700 hospitals that had not yet been certified as eligible under Title VI of the Civil Rights Act of 1964 to participate in federally aided health programs took steps during the year to eliminate discriminatory practices.

In 1967, Congress extended federal assistance for the development of community mental health centers to 1970. Under this program, federal grants totaling more than $130 million have been awarded to 256 centers for construction or staffing or both. Through these centers, mental health services will be available to 41 million people.

A series of conferences called by the Department of Health, Education, and Welfare during 1967 will influence the quality and availability of health services for years to come. Subjects considered were medical costs, and ways they can be held down; private health insurance, and ways to develop coverage that provides both health and financial protection; group medical practice, as a means of increasing physicians' capacity for serving more people; and construction of health facilities.

Health Protection. Federally supported immunization projects have been a significant factor in the virtual elimination of polio and certain other preventable diseases. Official and voluntary health organizations and national civic organizations were cooperating with the Public Health Service in a similar campaign to eradicate measles in 1967.

A Public Health Service follow-up to the 1964 report of the surgeon general's advisory committee confirmed and in many ways strengthened the earlier findings on the health hazards associated with cigarette smoking. The Federal Communications Commission ruled that radio and television stations carrying cigarette advertising must allow a significant amount of time for antismoking messages. Other developments included the first World Conference on Smoking and Health, which drew more than 500 scientists and educators from 35 nations. (See SMOKING AND HEALTH.)

Through program grants, research, and training, the Public Health Service continued to help states and communities to control environmental health hazards such as air pollution and insanitary solid waste disposal. The addition of a Division of Environmental Health Sciences to the National Institutes of Health in late 1966 strengthened basic research in this area.

Research. Possible cancer-causing factors, including chemicals polluting the environment, were the subject of intensive research in 1967. A lung cancer task force, set up at the direction of President Lyndon B. Johnson, will concentrate on such problems as development of a less-hazardous cigarette.

In heart disease research, five special centers were established. They will combine intensive research on acute heart attacks with expert treatment. Research was expanded on problems basic to the development of an artificial heart.

Rewarding achievements in the management and prevention of Rh blood disease—a condition that causes many deaths among new born babies—and the development of a more efficient and economical artificial kidney were among research highlights of the year.

Vital Statistics. In 1966 the number of births continued to decline, falling below 4 million for the second consecutive year. There were about 3,629,000 live births, for a general birthrate of 18.5 per 1,000 population.

The infant mortality rate was 23.4 per 1,000 live births, a significant decrease from the final rate of 24.7 in 1965. The maternal mortality rate in 1966 was the lowest ever recorded in the United States, 2.7 deaths per 10,000 live births.

Life expectancy at birth in 1966 was 70.1 years. In recent years, life expectancy at birth has been increasing at a faster rate for females than for males and for nonwhites than for whites.

There were about 1,869,000 deaths in 1966, an estimated rate of 954 per 100,000 population. The final rate for 1965 was 943. Heart disease, cancer, and stroke accounted for nearly two thirds of all deaths. Accidents ranked fourth.

(See also DEATH RATES.)

WILLIAM H. STEWART
Surgeon General, U. S. Public Health Service

PUBLIC OPINION SURVEYS

Monthly ratings by the Gallup Poll of President Johnson's popularity continued to show a downward trend throughout most of 1967. In October only 38% of the public expressed approval of "the way Johnson is handling his job as president." This was the lowest such figure for an incumbent president since December 1952, when only 31% approved of Harry S Truman's performance in office. By December, however, Johnson appeared to have reversed the downward trend, at least temporarily.

Opinions on Vietnam. Both the Gallup Poll and the Harris Survey revealed declining support for the war in Vietnam and mounting dissatisfaction with the President's Vietnam policy. In October only 28%, a new low, approved of the President's handling of the war, and for the first time a plurality of the public (46%) expressed the belief that sending troops to Vietnam had been a mistake.

Nevertheless, surveys indicated a rising "hawkish" trend. Presented a choice among three alternative policies, 31% said the United States should begin to withdraw, 10% would carry on the present level of fighting, and 53% would escalate.

Presidential Favorites. Of the potential Republican nominees for the presidency in 1968, former Vice President Richard M. Nixon consistently ranked first among Republican voters. Both Gallup and Harris surveys indicated, however, that New York Governor Nelson A. Rockefeller would "defeat" President Johnson by a larger margin.

Attitudes on Race Relations. The polls' coverage of racial tensions indicated a hardening of white attitudes following Negro riots in Detroit, Newark, and other cities. According to a Harris survey, white adults tended to blame the riots on "outside agitation" and to urge tougher law enforcement. Negroes, on the other hand, tended to explain them in terms of a lack of progress in achieving equality in jobs, housing, and education. A Gallup Poll report showed that most white Americans oppose "open occupancy" in housing. White majorities, however, did continue to support equal access to public places and a variety of federal aid programs.

Opinion in South Vietnam. In March the Columbia Broadcasting System broadcast the findings of a survey sponsored by CBS but conducted by Vietnamese researchers on the attitudes of the South Vietnamese people toward the war. Although interviewing could be done only in "secure" areas, the survey was nevertheless the first professional study of South Vietnamese public opinion. Findings included an overwhelming desire for peace, intense dislike of the Vietcong, divided opinion over U. S. bombing policy, and some suspicion of U. S. motives.

Professional Standards. The American Association for Public Opinion Research set standards that its members pledged to maintain in releasing survey results to news media. The standards specify disclosure of: the sponsor of the survey, exact wording of questions, size and nature of the sample, timing of the survey, and whether data were collected by personal interview, telephone, or mail.

In Europe, the Czechoslovak Academy of Science announced the establishment of a new public opinion research institute to study a broad range of topics.

The World Association for Public Opinion Research, with membership representing 44 nations, held its annual conference in Vienna in August.

Paul B. Sheatsley
National Opinion Research Center
University of Chicago

PUBLIC UTILITIES. See Electrical Industries; Federal Power Commission; Railroads; Telephone; Urban Transit.

PUBLISHING. See Book Publishing; Magazines; Newspapers.

PUERTO RICO

The long debate on the future status of Puerto Rico reached a climax in 1967 when a plebiscite on the issue was held on July 23. During the year, industry on the island surpassed agriculture as a source of employment and income, and manufacturing contributed more than twice the amount of income derived from agriculture.

The Plebiscite. The plebiscite, held in accordance with a recommendation of the United States-Puerto Rican Commission on the Status of Puerto Rico following its two-year study of the question, gave voters the chance to choose among (1) federated statehood, (2) full independence, or (3) their present commonwealth association with the United States, modified to give the island more power over internal affairs. Of the 1,067,349 registered voters, 66% (709,293) went to the polls on July 23. More than 60% of them voted for commonwealth status, 38.9% for statehood, and 0.6% for independence.

Two of the island's established political parties (the Independence party, favoring independence, and the Statehood Republican party, favoring statehood) decided to boycott the plebiscite. However, enough dissidents disregarded this decision to register the minuscule showing for independence and the surprisingly large one for statehood. As a result of this shift in tactics, two new political parties, the New Progressive party and the Opposition and Renewal party, were formed. Since both of the new organizations are in favor of statehood, citizens of Puerto Rico will see three parties promoting the same political formula in the 1968 general elections.

PUERTO RICO • Information Highlights

Area: 3,435 square miles (8,897 sq km).
Population: 2,700,000 (July 1, 1967 est.).
Chief Cities (1966 est.): San Juan, the capital (metropolitan area), 775,000; Ponce, 158,800; Bayamón, 113,600; Mayagüez, 90,700; Arecibo, 78,500; Caguas, 74,200.
Government: *Chief Officers*—governor, Roberto Sánchez Vilella (Popular Democratic party); secy. of state, Dr. Guillermo Irizarry (PDP); atty. gen., José C. Aponte (PDP); treas., Jorge Font Saldaña (PDP); chief justice, Luis Negron Fernandez (PDP). *Legislature*—(met Jan. 9, 1967): Senate, 32 members (23 Popular Democrats; 9 Statehood Republicans; House of Representatives, 64 members (47 PDP; 17 SRP).
Education: *School enrollment* (Jan. 1967)—public elementary, 426,470 pupils (11,056 teachers); public secondary, 224,633 pupils (7,273 teachers); nonpublic schools, 70,200 pupils (2,803 teachers); college and university (Jan. 1967), 43,131 students. *Public school expenditures* (1966–67)—34% of budget allocated for education.
Public Finance: *Revenues* (1966–67), $578,337,000 (motor fuel tax, $16,963,000; federal funds, $196,642,000). *Expenditures* (1966), $523,100,000 (education, 29%; health, welfare, and safety, 34%; highways, 9%). *Commonwealth debt*, $384,705,000 (June 30, 1967).
National Income (1967): $2,775,100,000; average annual income per person, $1,047.
Public Assistance (fiscal year 1967): $13,627,600 to 110,745 recipients (aged, $2,656,834; dependent children, $8,985,157).
Labor Force (1966): Employed persons, *Agricultural*, 112,000; *nonagricultural* (wage and salary earners), 605,000 (22.1% manufacturing, 21.7% trade, 16.5% government). *Unemployed persons*—91,000.
Manufacturing (1966): Value added by manufacture, $611,600,000 (apparel and related products, $104,000,000; wood products and furniture, $23,600,000; chemicals and allied products, $47,500,000; metal products and machinery, $99,800,000; textile mills products, $26,700,000).
Agriculture (1965–66): *Cash farm income*, $304,000,000 (livestock, $114,000,000; crops, $190,000,000). *Chief crops*—sugar cane, 9,500,000 tons; molasses, 60,700,000 gallons.
Mining (1966 est.): *Production value*, $47,774,000. *Chief minerals* (tons)—sand and gravel, 8,147,000; stone, 5,442,000; cement, 1,464,000; clays, 383,000; lime, 27,000; salt, 6,000.
Fisheries (1967): *Commercial catch*, 11,200,000 pounds.
Transportation: *Paved Roads* (1966), 5,000 miles (8,045 km); *motor vehicles* (1967), 420,555; *airports with scheduled service* (1967), 6.
Communications (1966): *Telephones*, 215,300; *television stations*, 11; *radio stations* (1967), 62; *newspapers*, 4.

Industrial Growth. The government's Economic Development Administration passed a milestone when the 1,500th plant promoted by Puerto Rico's "Operation Bootstrap" was inaugurated in July in the central mountain town of Orocovis. This plant, a hosiery factory, is part of the island's important textile and apparel industry. Since 1950, investment in "Bootstrap" plants has totaled about $1.2 billion.

Exchange Programs. Under several foreign exchange programs operated jointly by the Puerto Rican Department of State and the United States, 949 foreign visitors from 56 countries in Africa, Asia, Latin America, and Europe went to Puerto Rico during the fiscal year 1966–67.

Tourism. Visitors to the island in the 1967 fiscal year numbered 809,753, compared with 723,543 in fiscal 1966. Their expenditures, which each year provide Puerto Rico with one of its largest sources of income, were estimated at $161.8 million, an increase of $22.2 million over fiscal 1966.

Earl Parker Hanson
Consultant to the Department of State
Commonwealth of Puerto Rico

PULITZER PRIZES. See Prizes and Awards.

QUAKERS. See Friends, Religious Society of.

QUEBEC

French President Charles de Gaulle's visit was easily the most controversial event in Quebec in 1967. De Gaulle's call for a "free Quebec" and his subsequent abrupt departure claimed worldwide attention. Uncontroversial and outstandingly successful was Expo 67, the world's fair in Montreal marking Canada's Centennial of Confederation (see Expo 67). Quebec's general economic picture in 1967 appeared somewhat less favorable than it did in 1966, when the province made notable gains.

De Gaulle's Visit. Next to Expo 67, the event considered by Quebecers as the year's most important was the visit of President de Gaulle. No effort was spared to offer him a warm welcome, and the prospect of his visit aroused much enthusiasm. Nearly 300 representatives of the world press descended on Quebec to cover the visit.

On Sunday morning, July 23, the president of France disembarked from the cruiser *Colbert* at Anse-aux-Foulons (Quebec), where he was welcomed by the governor general of Canada, Roland Michener, by the secretary of state for foreign affairs, Paul Martin, and the prime minister of Quebec, Daniel Johnson.

De Gaulle's first words on Canadian soil pointed out the esteem and friendship that exist between France and French-speaking Canada and expressed his support of Quebecers' efforts to promote the French "presence." At each stop in the villages along the "Chemin du Roy" (King's Road) from Quebec to Montreal, de Gaulle developed—to repeated ovations—his main theme: that it is natural for those of French origin in Canada to aspire to self-determination and to want to take their destiny in hand.

QUEBEC • Information Highlights

Area: 594,860 square miles (1,540,669 sq km).
Population: 5,873,000 (July 1, 1967 est.).
Chief Cities (1966 census): Quebec, the capital, 166,984; Montreal, 1,222,255; Laval, 196,088; Verdun, 76,832.
Government: *Chief Officers*—lt. gov., Hugues Lapointe; prime minister, Daniel Johnson (Union Nationale); prov. secy., Yves Gabias (U. N.); minister of Justice, Jean-Jacques Bertrand (U. N.); minister of education, Jean-Guy Cardinal (U. N.); minister of finance, Paul Dozois (U. N); chief justice, Lucien Tremblay. Legislation Council, 24 members (appointive); Legislative Assembly, 108 members (56 Union Nationale, 50 Liberal, 2 Independent).
Education: *School enrollment* (1965–66)—Catholic elementary and secondary, 1,193,426 pupils (52,932 teachers); Protestant, 133,298 (6,392); private, 96,200 (6,300); Indian, 3,415 (151); college and university, (fall 1966), 76,398. School expenditure (Government expenditures, 1966–67), $483,021,700.
Public Finance (fiscal year 1967 est.): *Revenues*, $1,857,070,000 sales tax, $643,710,000; income tax, $618,000,000; federal funds, $278,641,000). *Expenditures*, $2,072,280,000 (education, $518,410,000; health and social welfare, $687,000,000; transport and communications, $328,150,000).
Personal Income (1966 est.): $10,830,000,000; average annual income per person, $1,885.
Public Assistance (fiscal year 1967 est.): $212,580,000 (chiefly to dependents and unemployed, $110,200,000).
Manufacturing (1964): Value added by manufacture, $3,937,816,000 (paper and allied industries, $450,365,000; primary metals, $287,498,000; textile industries, $311,736,000; clothing industries, $291,810,000; food and beverages, $556,590,000).
Agriculture (1966 est.): *Cash farm income*, $613,478,000 (livestock, $481,526,000; crops, $52,300,000; govt. payments, $56,956,000). *Chief crops* (cash receipts)—vegetables, $15,996,000 (ranks 2d among the provinces); fruits, $12,356,000 (ranks 3d); potatoes, $9,834,000 (ranks 4th).
Mining (1966 est.): *Production value*, $770,456,548. *Chief minerals* (short tons)—copper, 172,717 (ranks 2d among the provinces); asbestos, 1,336,566 (ranks 1st); iron ore, 13,817,367 (ranks 2d); zinc, 290,252 (ranks 1st).
Electricity: *Turbine installation* 48% of the aggregate of Canada; capacity, 10,786,000 kwh. *Production* (1966), 62,960,000,000 kwh; energy sold, $310,400,000.
Fisheries (1966): *Commercial catch*, 141,733,000 pounds ($6,373,000). *Leading species*—Lobsters, 3,756,000 pounds ($1,827,000). Cod, 44,812,000 pounds ($1,802,000); redfish, 42,035,000 pounds ($1,202,000).
Transportation: *Roads* (1965), 63,613 miles (102,353 km); *motor vehicles* (1966), 1,126,219; *railroads* (1966), 5,138 track miles (8,267 km); *airports* (1966), 61.
Communications: *Telephones* (1965), 2,054,482; *television stations* (1967), 16; *radio stations* (1966), 57; *newspapers*, 14.

Still to come were the historic words that upset so many people. They rang out from the balcony of the Montreal City Hall: "Tonight here, and along the route of the journey, I found myself in the same sort of atmosphere as prevailed on liberation day in France." Shouts joined the applause. The president said in a loud voice: "Long live Quebec!" Then he added, "Long live free Quebec!" The crowd instantly broke into thunderous applause.

To the general's "Long live free Quebec," the federal government in Ottawa, through Prime Minister Lester Pearson, replied "unacceptable." On the morning of July 26, de Gaulle canceled his visit to Ottawa, leaving Canada the same night.

The consensus of a subsequent public opinion poll in the province, sponsored by the Centre de L'Opinion Publique, was that Quebec had been right in inviting the general and receiving him royally. It was emphasized that the populace in no way confuses pride with revolution. This poll was a forceful reminder of the position of Quebec as a distinct sociological and political reality. The poll also showed that Quebec aspires to a greater degree of liberty but wishes to find it, insofar as possible, within Canada, rather than by way of political separation. (See also Canada.)

Economy. At year's end Quebec's economic performance in 1967 could not yet be summed up. Not only had inflationary pressures apparently eased off, but also the possibility of a slowing down of the economy could not be ruled out. In any case, the economic growth rate was expected to be lower in 1967 than in the recent past.

The after-effects of Expo 67 will maintain the level of Quebec's economic activity for some time. But this does not apply to the construction industry because most of the necessary building projects were completed before the fair opened. Also, there might be a drop in employment opportunities during the winter of 1967–68. Under these conditions, a growth of about 7.5% in Quebec's gross product should be a realistic forecast, broken down as follows: a rise of 4.5% in volume and an increase of 3% in prices. (The effect of 1966 wage and price increases extended into 1967.) Despite such price adjustments, profit levels were not expected to rise. Personal income, however, should grow by more than 9%.

The Bank of Canada reduced its discount rate and eased credit restrictions in 1967. The government of Quebec was unable to put into effect as many policies as it desired to sustain economic expansion. The government did plan, however, to exceed the 1966 total amount of construction carried out by itself or paid from public moneys.

Investment. According to preliminary figures, net investment in the manufacturing sector in Quebec rose to $660.3 million in 1966, a growth rate of 20.2% over 1965. The latest forecast for 1967 indicated that this figure would be $615.4 million, a dip of 6.8%. Net investment in Quebec in 1967 was expected to show an increase of 12% over 1965.

Lionel LaBerge
Director, Quebec Year Book

RADIO AND TELEVISION. See Television and Radio.

UNITED AIRCRAFT TURBOTRAIN

TURBOTRAIN, powered by gas turbines, runs on existing track and attains speeds well over 100 miles per hour. To be placed in passenger service between New York City and Boston, Mass., in 1968, the train is expected to cut the time of the 4-hour run by 1 hour.

RAILROADS

For the United States' 76 Class I railroads (those with revenues of at least $5 million a year), 1967 was a year of mixed blessings. The testing of "new breed" passenger trains at speeds in excess of 160 mph headed an impressive list of technological breakthroughs. The merger movement, promising savings ultimately in the billions of dollars, picked up momentum. The regulatory climate improved.

On the minus side, revenues from both freight and passenger operations sank below the levels of 1966. Wages rose, along with other operating costs, and spending for capital improvements had to be curtailed sharply. After five years of steady improvement, balance sheets were again splotched with red ink, and there was renewed talk of a "deteriorating railroad situation." But most railroad men tended to view the setbacks of 1967 as temporary, deriving more from generally recessionary conditions than from any inherent weaknesses in railroad transportation.

Passenger Service. Paradoxically, railroads experienced some of their most perplexing difficulties—and at the same time scored their greatest advances in technology—in passenger-train operations. Financially, passenger trains were in deeper trouble than ever before. The railroad passenger-service deficit, which has averaged well above $400 million annually during the 1960's, was further aggravated in 1967 by the decision of the U. S. Post Office Department to remove most Railway Post Office cars from operation. The result was a wholesale abandonment or downgrading of trains. Three railroads—the Kansas City Southern, the Monon, and the St. Louis-San Francisco (Frisco)—moved to get out of the passenger business entirely. Larger carriers took steps to restructure their services, emphasizing medium rather than long hauls. The New York Central's Twentieth Century Limited, which for 65 years epitomized the best in red-carpet rail travel, made its last run in December 1967—one of several famous name trains to vanish from timetables.

A 1967 study made by the Chicago, Burlington & Quincy Railroad emphasized the disadvantages of railroads in their battle with airlines for the long-distance travel market. Comparing a run of the Burlington's California Zephyr between Chicago and Denver with a Boeing 727 jet flight on the same route, the railroad found that the train operated at a loss of $2.07 per passenger while the airline had a profit of $13.12 per passenger.

It was against this background that a new generation of passenger trains began to come off the production lines in 1967. The Metroliner trains, built by the Budd Company of Philadelphia for high-speed service between New York and Washington over lines of the Pennsylvania Railroad, achieved speeds of 164 mph in tests. The gas-turbine driven TurboTrain, engineered to aerodynamic standards by the United Aircraft Corp. and built by Pullman, Inc. of Chicago for service on the New York, New Haven & Hartford Railroad between Boston and New York, was tested at 170.8 mph. These trains, scheduled to become operational in 1968, were built under the federal government's High-Speed Ground Transportation program as part of a broad effort to relieve highway and airlane congestion in the northeastern United States.

The federal government also announced plans for an experimental auto-ferry train between Alexandria, Va., and Jacksonville, Fla. The experiment would require the construction of special railroad cars capable of carrying motorists and their automobiles on the same train—an adaptation of a plan already successfully implemented on most European railway systems. At year's end, the program was awaiting the appropriation of federal funds.

Freight Service. While the public eye was focused on passenger trains, freight service continued in 1967 to provide the bulk of railroad income—more than 90 cents out of every revenue dollar. A cooling-off of the national economy, combined with strikes in the automobile industry, adversely affected carloadings. The reduced carloadings led to drastic cutbacks in orders for new freight-hauling equipment. Only about 50,000 new freight cars were ordered in 1967, in contrast to more than 100,000 in 1966. About 1,100 new locomotives were added in 1967, compared with the usual 1,400. At the same time, advances in technology permitted the railroads to take historic strides toward improved use of available freight cars and motive power.

One of the year's most significant developments was the decision by the Association of American Railroads (AAR) to create the TeleRail Automated Information Network (TRAIN), an electronic, nationwide freight-car control system to be operated from Washington with computer links to all Class I roads. In a related development, the AAR approved an automatic car identification system developed by Sylvania Products, Inc. In the identification system, known as KarTrak, freight cars are labeled with markings capable of being "read" by wayside scanners. By keeping closer tab on cars, through TRAIN and KarTrak, railroads hoped to increase the working time of the average freight car by as much as 10%—from an average of 51 miles per day to about 56 miles.

Railroads also moved toward more efficient use of motive power. The Norfolk & Western operated a 500-car coal train on a 157-mile run from the West Virginia coal fields to Portsmouth, Ohio. The longest and heaviest train in history, it was powered by six 3,600-horsepower diesel-electric locomotives, of which three were radio-controlled "slave" units spotted 300 cars back from the lead locomotives.

Piggyback. The brightest spot in the railroad traffic spectrum was provided by piggyback—or TOFC (trailer on flat car)—haulage. Piggyback carloadings rose by 3.8% in 1967, while total carloadings declined by 5.3%.

Increasing attention was paid to the wheelless container, a variation of piggyback. The Trailer Train Company of Philadelphia, which operates a coast-to-coast pool of more than 40,000 piggyback flatcars, commissioned four commercial car-builders to design prototype, all-purpose cars capable of carrying either piggyback trailers or containers. Late in the year, Trailer Train approved a car incorporating design elements from all four prototypes. A major advance in freight-car design, the new 89-foot car has trailer hitches for holding fast the wheels of highway vans, as well as pedestal-type container supports.

Auto-rack flatcar traffic, a close relative of piggyback, also scored successes. There were 17,000 multi-level auto-rack flatcars in service in 1967, and they hauled nearly 50% of all new automobiles moving by common carrier. By contrast, the railroads in 1960 (before the advent of the auto-rack car) hauled only 9.7% of new-auto traffic.

Mergers. The railroad merger movement, all but stalled in 1966, began to pick up speed in 1967. The year's biggest consolidation joined the Atlantic Coast Line and the Seaboard Air Line railroads into a 9,600-mile system, known as the Seaboard Coast Line, ranking eighth among all U. S. railroads in mileage and ninth in assets ($1.2 billion).

In December the Interstate Commerce Commission reversed a 1966 decision and approved merger of the Northern Pacific, the Great Northern, the Burlington, and the Spokane, Portland & Seattle railroads into a new 27,000-mile system to be known as the Great Northern Pacific & Burlington Lines, Inc. The effective date of merger was delayed pending appeals by protesting interests.

Meanwhile, the merger of the Pennsylvania and the New York Central railroads, approved by the ICC in 1965, moved closer to consummation. (On Jan. 15, 1968, the Supreme Court cleared away the last legal obstacles, and the merger took place on Feb. 1, 1968.) The ICC approved terms for including the bankrupt New Haven in the Penn-Central later.

In other merger activity, the Missouri Pacific won control of the Chicago & Eastern Illinois; the Chicago & North Western was granted approval to merge with the Chicago Great Western; and consolidation talks were initiated by the Illinois Central and the Gulf, Mobile & Ohio.

At year's end, these additional merger and control proposals were making their way through the ICC and the courts: Competing proposals by the Union Pacific to merge with, and the Chicago & North Western to control, the Chicago, Rock Island & Pacific; control of the Atchison, Topeka & Santa Fe by the Missouri Pacific and the Mississippi River Fuel Corp.; merger of the Chicago & North Western and the Chicago, Milwaukee, St. Paul & Pacific; competing proposals by the Missouri Pacific and the St. Louis Southwestern (Cotton Belt) to purchase the Alton & Southern; merger of the Norfolk & Western and the Chesapeake & Ohio, along with the acquisition, by new subsidiaries, of the Erie-Lackawanna, Delaware & Hudson, Boston & Maine, Reading, and Central Railroad of New Jersey; and merger of the Erie-Lackawanna, Delaware & Hudson, and Boston & Maine into the Norfolk & Western under conditions set forth when the ICC approved the merger of the Norfolk & Western and the New York, Chicago & St. Louis (Nickel Plate).

Financial Developments. In the first three quarters of 1967, the Class I railroads had combined earnings of $342 million, a 48% decline from the correspond-

LONDON DAILY EXPRESS

POWERED BY ROCKETS, riding just above its T-shaped concrete track on a thin cushion of air, a new French "aero train" attained a speed of 235 miles per hour during a test run in late 1967. The train will be powered by a turboprop engine and will carry passengers at speeds up to 180 miles per hour when put in regular service.

ing figure a year earlier. Twenty-six railroads operated at a net deficit during that period—14 in the East, 4 in the South, and 8 in the West. One carrier, the Central Railroad of New Jersey, went into bankruptcy.

Rates and Fares. In mid-1967, the railroads applied for and won, on a temporary basis pending further investigation, a general freight rate increase averaging between 2% and 3%. This followed a 10-year period during which rail freight rates had declined by 14% while the cost-of-living index was rising by 15%.

Among a number of rate proposals designed to capitalize on the efficiency of railroads as bulk carriers, the most significant was the Illinois Central's "Rent-a-Train" plan for large grain shipments from Illinois to Louisiana and Mississippi ports.

The "Rent-a-Train" tariff offered eligible shippers a train of 86 to 115 cars, on an annual rental basis—$1,000,000 if the railroad furnished cars, or $700,000 if the cars were provided by the shipper or receiver.

Late in 1967, the ICC granted Western railroads a 5% increase in passenger fares, the first since 1962.

Labor. Average railroad employment in 1967 declined to about 610,000, compared with the 1926–1930 average of 1,663,896. Wage increases of from 5% to 6% went into effect for most railway employees. Despite considerable strike talk during the year, there was only one major work stoppage. The stoppage came when the six shopcraft unions walked out on July 16, but it lasted only about 24 hours. (See also LABOR—*Strikes and Settlements*.)

Plant and Facilities. On Jan. 1, 1967, Class I railroads had a net investment of $27.2 billion. The investment included 211,500 miles of main line, 27,884 locomotives, 1,494,000 freight cars, and 20,050 freight cars. (See also TRANSPORTATION.)

LUTHER S. MILLER
Editor, "Railway Age"

REAGAN, Ronald Wilson

Governor of California: b. Tampico, Ill., Feb. 6, 1911.

Republican Ronald Reagan was inaugurated as governor of California in January 1967 after defeating two-term Democrat Edmund G. (Pat) Brown by nearly 1 million votes. Reagan carried Republicans into four of the five top elective offices; the Democrats retained slim majorities in both houses of the newly reapportioned legislature. During his first year the governor concentrated on his relationship with the first full-time legislature in the state's history and on his increasing activity on the "banquet circuit" in a pre-election year.

Financial Problems. Reagan had campaigned on pledges to "return the government to the people," reduce the size and cost of government, increase financial responsibility, and aggressively attack "crime in the streets." His first year's experience with the realities of putting such promises into practice involved him in almost constant conflict with the legislature. Notable among the results were a record budget for any state ($5.09 billion) and the biggest single increase in taxes in any state (over $930 million). Faced with an inherited deficit, Reagan proposed a two-phase solution—reduce expenditures and increase revenues.

His proposed 10% reduction for all agencies met with heated opposition but also considerable success. While opposing a withholding scheme for income taxes, the governor succeeded in winning approval for increased taxes on incomes, sales, cigarettes, liquor, and banks and corporations.

Political Activity. As the year wore on, Reagan became more and more active nationally as a speaker. His frequent trips out of state were ostensibly for party fund-raising efforts, but political observers noted that his appearances might be related to the 1968 presidential nominating convention. Political polls consistently suggested that Reagan's star was rising. His political assets seem to include his exposure as a movie and television star, his increasing legitimacy as a politician rather than citizen-amateur, his appeal to "common-sense" solutions to complex problems, and his acceptability to the conservatives. (See also CALIFORNIA.)

Career. Reagan was a prominent motion picture and television personality and served as president of the Screen Actors Guild (1947–52), when he was identified as a liberal Democrat. His political conversion began when he became a Democrat for Eisenhower and culminated in his role as cochairman of California Citizens for Goldwater in 1964. His impressive speaking efforts during the Goldwater campaign led to his gubernatorial candidacy.

GERALD RIGBY
University of Southern California

WIDE WORLD

GOVERNOR RONALD REAGAN of California, with his wife, Nancy, smiles for newsmen and well-wishers upon leaving a Santa Monica hospital in early August after a successful bladder operation.

RECORDINGS

ADRIAN SIEGEL

CONDUCTOR EUGENE ORMANDY leads the Philadelphia Orchestra. After 25 years with Columbia, the orchestra signed an exclusive contract with RCA Victor Records.

RECORDINGS

Record sales continued to grow in 1967. In the classical field the largest sales were still in low-priced, or budget labels, but recording companies introduced new medium-priced lines. The year also saw the start of the phasing out of monophonic pressings of classical releases.

CLASSICAL RECORDS

The trend toward a gradual phasing out of the monophonic classical disc gained significant headway in 1967. Early in the summer most of the major labels announced that henceforth their mono prices would be raised by $1 to match stereo prices. A few months later, Deutsche Grammophon, Nonesuch, Angel, Vox, Philips, and Command discontinued production of new monophonic records altogether, and other companies promoted the notion that their stereophonic discs could be played by any modern, lightweight tone arm without damage to the grooves.

Mono Phaseout. Stereo/mono duplication has always been a vexing problem. For manufacturers it entails extra costs in double mastering of the stereo/mono discs, and dealers must sustain the additional expenses of maintaining double inventories. By producing only one version of each new recording, the industry could boost considerably its 1.7% margin of profit. According to company executives, the demand for monophonic classical records decreases each year and in 1967 ran far behind the demand for stereo. In the popular field, however, mono still accounts for the majority of sales.

Middle-Price Stereo. With budget lines still enjoying great favor, sales of high-priced labels were seriously threatened. Of the $5.79 discs, only those that featured such magic names as Bernstein or Sutherland could seriously compete with the $2.50 lines. Therefore, in order to continue to expand their classical recording programs, Elektra and Vanguard introduced two new stereo-only labels, Checkmate and Cardinal, priced at $3.50—the lowest possible list price compatible with production costs.

Whether the "middle-price" concept will attract other labels remains to be seen; it does have the advantage of allowing companies to experiment with artist and repertory ideas that are impractical in the $2.50 and $5.79 price productions.

Exclusive Contracts. RCA Victor Records obtained exclusive rights to record and distribute performances of the Philadelphia Orchestra, according to the terms of a 5-year contract signed in the fall. The orchestra has been under contract to Columbia for more than 25 years.

Another event of note was an agreement between Capitol Records and the state-owned Soviet record industry Mezhdunarodnaya Kniga (generally called "MK" in the United States) that gives Capitol "exclusive first rights to manufacture, license, and distribute in the United States and the Western Hemisphere all recordings by Russian artists."

Outstanding Releases. Perhaps the most notable release of the year was the first integral edition of the Mahler Symphonies, on 14 Columbia records with Leonard Bernstein conducting the New York Philharmonic and the London Symphony Orchestra.

Although the Bernstein versions have arrived first, a number of other conductors are well on their way toward a complete Mahler set: Erich Leinsdorf and the Boston Symphony Orchestra for RCA Victor, Rafael Kubelik and the Orchestra of the Bavarian Radio for Deutsche Grammophon, Georg Solti and the London Symphony Orchestra for London, and Bernard Haitink and the Amsterdam Concertgebouw Orchestra for Philips. London Records also offered a mammoth package: Wagner's complete *Ring* cycle on 19 records. Meanwhile, Herbert von Karajan's *Ring* project got under way with the release of his recording of *Die Walküre* on Deutsché Grammophon (the next opera in the series, *Das Rheingold,* is scheduled for early 1968 release).

Other Releases. Following is a selected list of notable classical releases in 1967.

BARTÓK, *Concerto for Violin and Orchestra No. 2; Six Duos for two Violins:* Yehudi Menuhin and Nell Gotkovsky, violins; New Philharmonia Orchestra, Antal Dorati, conductor (Angel).

BEETHOVEN, *Concerto for Piano and Orchestra No. 3 in C minor, Op. 37:* Artur Rubinstein, piano; Boston Symphony Orchestra, Erich Leinsdorf, conductor (RCA Victor).

BEETHOVEN, *Quartets for Strings* (complete): Hungarian Quartet (Seraphim, 10 discs).

BEETHOVEN, *Symphony No. 3 in E flat, Op. 55 ("Eroica"):* Vienna Philharmonic Orchestra, Hans Schmidt-Isserstedt, conductor (London).

BEETHOVEN, *Works for Cello and Piano* (complete): Pierre Fournier, cello; Wilhelm Kempff, piano (Deutsche Grammophon, 3 discs).

BERG, *Wozzeck:* Isabel Strauss, Walter Berry, and other singers; Orchestra of the Paris Opera, Pierre Boulez, conductor (CBS, 3 discs).

BREAM, Julian, *Twentieth Century Guitar Music,* by Britten, Henze, Brindle, Villa Lobos, and Martín: Julian Breame, guitar (RCA Victor).

DVOŘÁK, *Symphonies* (complete): London Symphony Orchestra, Istvan Kertesz, conductor (London, 9 discs).

ELGAR, *Concerto for Cello and Orchestra in E minor, Op. 85:* Jacqueline du Pré, cello; London Symphony, Sir John Barbirolli, conductor (Angel).

HANDEL, *Julius Caesar:* Beverly Sills, Maureen Forrester, and Norman Treigle, singers; chorus and orchestra of the New York City Opera, Julius Rudel, conductor (RCA Victor, 3 discs).

HAYDN, *The Seasons:* Gundula Janowitz, Peter Schreier, and Martti Talvela, soloists; Wiener Symphoniker, Karl Böhm, conductor (Deutsche Grammophon, 3 discs).

HOLST, *The Planets:* New Philharmonia Orchestra, Sir Adrian Boult, conductor (Angel).

HOROWITZ, Vladimir, *Carnegie Hall, 1966:* Vladimir Horowitz, piano (Columbia, 2 discs).

MAHLER, *Das Lied von der Erde:* James King and Dietrich Fischer-Dieskau, soloists; Vienna Philharmonic Orchestra, Leonard Bernstein, conductor (London).

MAHLER, *Symphonies* (complete): New York Philharmonic and London Symphony Orchestra, Leonard Bernstein, conductor (Columbia, 14 discs).

MONTEVERDI, *L'Incoronazione di Poppea:* soloists and instrumentalists of the Collegium Musicum and the University of California at Berkeley; Alan Curtis, conductor (Cambridge, 4 discs).

MOORE, Gerald, *Homage to Gerald Moore:* Victoria de los Angeles, Elisabeth Schwarzkopf, and Dietrich Fischer-Dieskau, soloists; Gerald Moore, piano (Angel, 2 discs).

MOZART, *Concerto for Piano and Orchestra No. 15 in B flat (K. 450);* Symphony No. 36 in C (K. 425); Leonard Bernstein, piano; Vienna Philharmonic Orchestra, Leonard Bernstein, conductor (London).

MOZART, *Concertos for Piano and Orchestra No. 8 in C (K. 246) and 9 in E flat (K. 271):* Vladimir Ashkenazy, piano; London Symphony Orchestra, Istvan Kertesz, conductor (London).

NEW YORK PRO MUSICA, *The Romance of Medieval France:* vocal and instrumental music by anonymous 14th century French composers and Guillaume de Machaut: New York Pro Musica, John White, conductor (Decca).

NIELSEN, *Symphony No. 1 in G minor; Saul and David (Prelude to Act II):* London Symphony Orchestra, André Previn, conductor (RCA Victor).

ORFF, *Oedipus der Tyrann:* Astrid Varnay, Gerhard Stolze, and other singers; Chorus and Orchestra of the Bavarian Radio, Rafael Kubelik, conductor (Deutsche Grammophon, 3 discs).

PROKOFIEV, *Ivan the Terrible:* soloists: Moscow Chorus; USSR Symphony Orchestra, Abram Stasevich, conductor (Melodiya/Angel, 2 discs).

PUCCINI, *Madama Butterfly:* Renata Scotto, Carlo Bergonzi, Rolando Panerai, and other singers; chorus and orchestra of the Rome Opera, Sir John Barbirolli, conductor (Angel, 3 discs).

SCHUBERT, *Die Winterreise;* Schumann, *Dichterliebe:* Peter Pears, tenor; Benjamin Britten, piano (London, 2 discs).

SUBOTNICK, *Silver Apples of the Moon:* electronic composition (Nonesuch).

TCHAIKOVSKY, *Pique Dame:* Tamara Milashkina, Zurab Andzhaparidsye, Yuri Mazurok, and other singers; chorus and orchestra of the Bolshoi Opera, Boris Khaikin, conductor (Melodiya/Angel, 4 discs).

WAGNER, *Die Walküre:* Régine Crespin, Gundula Janowitz, Jon Vickers, Thomas Stewart, and other singers; Berlin Philharmonic Orchestra, Herbert von Karajan, conductor (Deutsche Grammophon, 5 discs).

PETER G. DAVIS
"High Fidelity" Magazine

DDG/LAUTERWASSER

HERBERT VON KARAJAN is recording Wagner's complete *Ring* cycle on Deutsche Grammophon. The project was begun in 1967 with the release of *Die Walküre,* second opera of the four.

JAZZ RECORDS

Big jazz bands, which had not caused much stir on records since World War II, moved back into the spotlight in 1967—or, at least, into more of the spotlight than they had held for two decades.

Return of the Big Bands. The year witnessed the recording debut of two significant big bands. One was led by Buddy Rich, a veteran, highly pyrotechnical drummer, whose dynamic drumming is matched by a strong ensemble power on the band's first two discs, *Swinging New Big Band* and *Big Swing Face* (both Pacific Jazz). The other was a 21-piece band led by Don Ellis, a trumpeter with 10 years of experience in various aspects of jazz experimentation. In his arrangements on *"Live" at Monterey* (Pacific Jazz), Ellis combined unusual time signatures, such as 19/8, with a robust, swinging attack in semi-traditional style.

A big band led by vibraphonist Tommy Vig was effective in a less exploratory vein on *The Sound of the Seventies* (Milestone), and the Ohio State University Jazz Workshop Band, the prizewinning ensemble on the 1967 *Intercollegiate Music Festival* (Impulse), produced startling work that indicated the big band renaissance might have an exciting future.

Meanwhile Duke Ellington's band, one of the few old, established ones still in business, recorded one of its most fully realized extended works, *The Far East Suite* (RCA Victor)—a set of musical impressions of a State Department-sponsored tour in which typical Ellingtonian musical colors are accented with Eastern ones.

Reissues. Big bands of the past returned in a new series of jazz reissues by Decca. Its *Jazz Heritage* series began with recordings made in the 1920's and 1930's by the bands of Chick Webb, Duke Ellington, Earl Hines, Louis Armstrong, and Andy Kirk.

Columbia, whose jazz reissues had fallen off sharply after several years of steady output, got back into action with discs by Chick Webb and Jimmie Lunceford. Milestone, a new label, reissued collections by Jelly Roll Morton, Johnny Dodds, Ma Rainey, and Blind Lemon Jefferson.

The two most comprehensive jazz reissue series, RCA Victor's Vintage series and that of Historical Records, were merged during the year. RCA Victor added to the available recordings of Fats Waller, Sidney Bechet, and Jelly Roll Morton and assembled the recorded jazz sessions that French critic Hugues Panassie supervised in 1939. Historical Records produced several miscellanies of long-unavailable recordings, most notably *Chicago: South Side.*

Avant-Garde Releases. At the other end of the jazz spectrum the avant-gardists were increasingly busy in recording studios. Trumpeter Bill Dixon produced discs for Savoy—with groups led by Robert Pozar, Ed Curran, and Marc Levin, and recorded several of his own compositions on *Intents and Purposes* (RCA Victor).

Roswell Rudd, a trombonist who has been one of the most readily communicative avant-gardists, made an album that demonstrated his ability to bridge the gap between the past and the future—*Everywhere* (Impulse)—and the late John Coltrane emphasized the leadership he had brought to the avant-garde movement on *Kule Se Mama* and *Expression* (both on Impulse).

Other Releases. Other jazz releases of special interest in 1967 included the following:

Dave Brubeck, *Bravo Brubeck* (Columbia CL 2695)
Gary Burton, *Duster* (RCA Victor 3835)
Ornette Coleman, *The Empty Foxhole* (Blue Note 4246)
Eddie Daniels, *First Prize* (Prestige 7506)
Erroll Garner, *That's My Kick* (MGM 4463)
Bobby Hutcherson, *Components* (Blue Note 4213)
John Klemmer, *Involvement* (Cadet 797)
Original Salty Dogs (GHB 44)
Duke Pearson, *Sweet Honey Bee* (Blue Note 4262)
Ira Sullivan, *Horizons* (Atlantic 1476)
Ralph Sutton, *Suttonly* (Solo 103)
Stanley Turrentine, *The Spoiler* (Blue Note 4256)

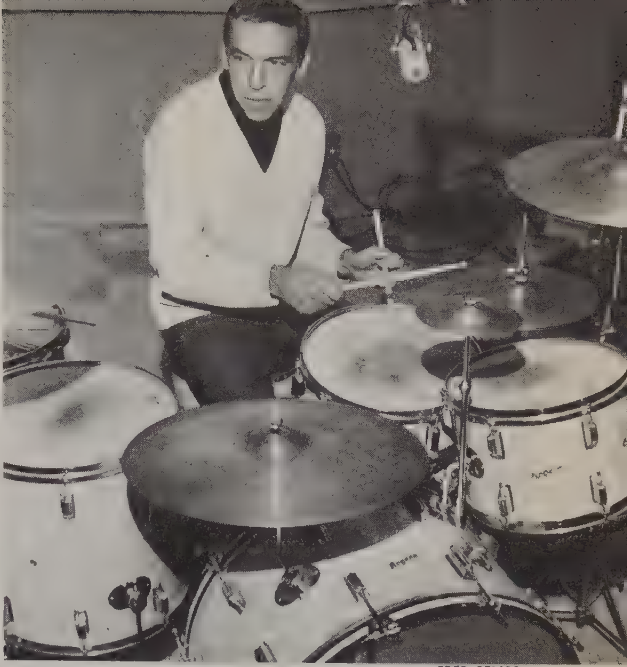
JOHN S. WILSON
The New York Times and "High Fidelity" Magazine; Author of "Jazz: The Transition Years—1940–1960"

POPULAR RECORDS

Popular music entered an impressionistic era in 1967. Many of the compositions, created by youth and aimed at youth, continued to rail at the Establishment and in many instances sought to escape from reality. But they offered a different, more experimental type of music and lyrics.

Many of the songs popular in 1967 told stories. The lyrics were almost always, however, a sharp departure from the "moon-tune-June" rhymes that characterized pop hits in bygone days. In its own way, the record industry was following the experimentation that has already taken place in drama, motion pictures, and the graphic arts. Some of this new music, in fact, formed the background in 1967 to motion pictures.

Sales Growth. For the fifth consecutive year, Gold Record Award certifications by the Record Industry of America (RIAA) reached a new high. (Gold Records are awarded to a single disc that is certified as having sold one million copies and to an album with a sale value of $1 million.) Compared with 58 albums and 23 singles certified in 1966, RIAA issued certifications to 61 albums and 34 singles in 1967. The total record business appeared to have increased about 10% over the $700 million in retail list price sales registered in 1966.



FRED SELIGO

JAZZ DRUMMER BUDDY RICH's big band made its debut with two recordings in 1967, the year in which the public and the record industry rediscovered the big jazz band sound.

The Hippie Impact. The west coast, particularly San Francisco, which gave birth to the hippie movement, became an important area for the discovery and the emergence of popular singing groups. Throughout the year they sang about love or the lack of it, advocated escape from an unbearable reality, preached for and against the war in Vietnam, and rejected God and then turned to mysticism to focus on a contemplative life. If this song material seems to reflect confusion, it appears to be a true mirror of the teen-agers' inner turmoil.

Oddly enough, much of the pop music began to find increasing favor with adults—the very Establishment that the younger generation was rebelling against. In 1967 it became fashionable for music critics and record reviewers to pontificate at great length on the hidden meanings of pop recordings.

Rhythm and Blues. The rhythm and blues field took on a growing importance in 1967, with such artists as Aretha Franklin, Sam & Dave, Arthur Conley, and Otis Redding (who was lost in an airplane crash in November) emerging among the best-selling recording artists.

Popular Favorites. The most popular single records in 1967 included: *To Sir With Love,* Lulu (Epic); *The Letter,* The Box Tops (Mala); *Ode to Billie Joe,* Bobby Gentry (Capitol); *Windy,* The Association (Warner Bros.); *I'm A Believer,* The Monkees (Colgems); *Light My Fire,* The Doors (Elektra); *Somethin' Stupid,* Nancy Sinatra and Frank Sinatra (Reprise); *Happy Together,* The Turtles (White Whale); *Groovin',* The Young Rascals (Atlantic); *Can't Take My Eyes Off You,* Frankie Valli (Philips).

Among the best-selling albums were: *The Monkees* and *More of The Monkees,* The Monkees (Colgems); *Dr. Zhivago,* film soundtrack (RCA Victor);

The Sound of Music, film soundtrack (RCA Victor); *Temptations Great Hits* (Gordy); *A Man and A Woman,* film soundtrack (United Artists); *S. R. O.* and *Whipped Cream & Other Delights* and *Going Places,* all by Herb Alpert and the Tijuana Brass (A & M); *Sgt. Pepper's Lonely Hearts Club Band,* The Beatles (Capitol).

Awards. The 1967 results of the Annual Readers Poll conducted by *Down Beat* of top performers produced the following awards:

Male Singer—Lou Rawls (Capitol)
Female Singer—Ella Fitzgerald (Verve)
Group—The Beatles (Capitol)
Big Band—Duke Ellington (Reprise)
Combo—Miles Davis (Columbia)
Record of the Year—*Miles Smiles,* Miles Davis (Columbia)
Hall of Fame—Billy Strayhorn

HENRY BRIEF
Record Industry Association of America, Inc.

REFUGEES

The problem of the world's refugees continued to increase in complexity and seriousness during 1967. There was an increase of nearly 800,000 in the total number of refugees on record, exclusive of the Vietnamese. New complications in the refugee situation arose as a result of the Israeli-Arab war in June.

There are approximately 15 million refugees in the world. This figure includes only refugees who have crossed an international border and have sought asylum in an adjacent country; that is, refugees who are recognized as qualifying under usual legal definitions. In addition, there are "national" refugees who have not crossed national borders—for example, in Vietnam (2,000,000), as a result of the Vietnam War, and in Nigeria (500,000), where Ibo tribesmen from the north have migrated into the Eastern Region.

Middle East. The most serious hindrance to the solution of the problem of the world's homeless continues to be their invisibility, complicated by the general indifference of governments. This apathy became especially noticeable in 1967, when fighting in the Middle East between Israel and the Arab states, which broke out on June 5, threw a spotlight on the most troublesome and stubborn refugee problem in the world, that of the Palestine refugees from the fighting in 1948. Governments took little advantage of the chance to reexamine and change this situation.

According to UN figures, the number of Arab refugees in the Middle East rose from 1.3 million to 1.5 million as a result of the fighting in June (Israeli census figures placed the refugee total at 288,000 fewer). In addition, as a result of the war, Jewish residents of Libya (5,000), Morocco (9,000–12,000), Egypt (3,000), and Yemen (3,000) were forced to leave their homes and become refugees.

On December 6, Commissioner General Laurence Michelmore of the UN Relief and Works Agency, which is responsible for many programs dealing with Middle East refugees, requested $47.5 million in assistance funds. However, despite the great increase in the number of refugees in the area, and the serious displacement of thousands of refugees who had already been settled, only $26.3 million was pledged by UN member countries—$3.8 million less than in 1966—and the largest contribution, $22.2 million from the United States, was identical to the U. S. pledge in 1966. (The U. S. government contribution toward the programs of the UN High Commissioner for Refugees was $600,000, the same total as in 1966.)

One positive side effect of the new uprooting of Palestine refugees was the reduction and reorganization of the much-abused ration rolls, through which each refugee was entitled to a certain amount of food and supplies. Before the reorganization, many cards of missing or dead refugees had been acquired by merchants, who would then sell the supplies they collected on the open market.

Africa. In Africa, refugees continued to move out of the Portuguese territories of Angola and Mozambique, as well as out of the minority-ruled countries of southern Africa, including South Africa, South West Africa, and Rhodesia. Large numbers of refugees were reported to have fled from the Democratic Republic of Congo to Rwanda and Burundi as a result of mercenary rebel activity during the summer months of 1967.

Cuba. There was a total of 258,196 Cuban refugees in the United States as of September 1. Refugees from Castro's Cuba continue to move into the Miami, Fla., area at the rate of 900 per week.

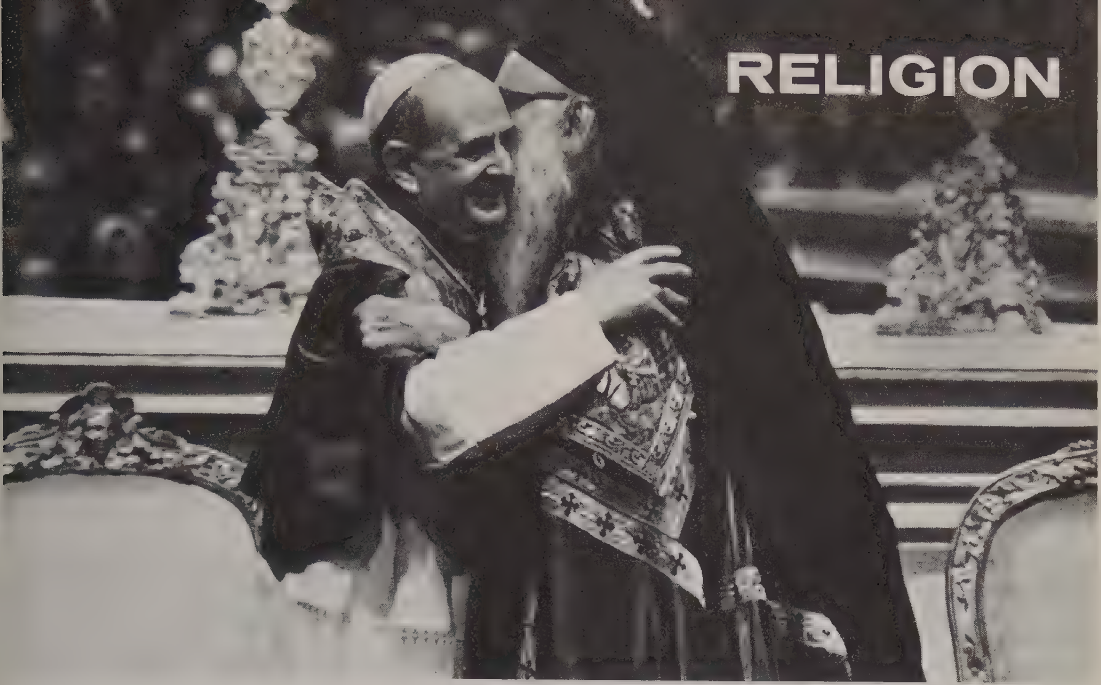
Eastern Europe. Approximately 35,000 refugees a year continue to move from eastern Europe to the west. Refugees in this category arrive in the United States at the rate of 135 to 140 every 10 days.

R. NORRIS WILSON
U. S. Committee for Refugees

WIDE WORLD

REFUGEE Arab children wait patiently to get water from a van that carries it to their camp near Amman, Jordan. They are part of the 200,000 refugees who fled from their homes in the Israeli-Arab war.

RELIGION



ROMA/WAAG FROM PIX

POPE PAUL VI (*left*) greets Orthodox Patriarch Athenagoras I at St. Peter's Basilica, Rome, in October. Athenagoras was repaying a visit the pope made earlier to Istanbul.

RELIGION

The movement toward unity among the world's major religions continued to make remarkably rapid progress during 1967. These advances are detailed in this article under the following separate headings: (1) A General Survey; (2) Protestantism; (3) Roman Catholicism; (4) Judaism; (5) Eastern Orthodoxy; (6) Islam; and (7) Oriental Religions. The article is supplemented by a table listing the membership of all major U. S. churches. (Leading U. S. and Canadian church groups are treated in separate articles under their own headings; see, for example, BAPTIST CHURCHES; EPISCOPAL CHURCH.)

A GENERAL SURVEY

Increased concern for social issues, reflected in ecumenical meetings and in greater cooperation between religious groups and other agencies of social change, was evident among the world's religious bodies during 1967.

A Call to Activism. In April, Pope Paul VI issued an encyclical, *Populorum progressio,* calling on all men of good will to cooperate in achieving economic justice, especially for emerging peoples and developing countries. Dialogue between Christians and Marxists increased, even as appraisals of the effects of the Russian Revolution after 50 years noted a persisting interest in religion in the Soviet Union. The Central Committee of the World Council of Churches, meeting in Crete in August, approved closer cooperation between council members and Roman Catholics in mission activities, relief work, Bible translation, and education.

UN Secretary-General U Thant broke precedent by addressing the 4th Friends World Conference in Greensboro, N. C., in July. He urged all religious groups to intensify efforts for world peace. Clergy and laymen of many religious groups were active in organizations critical of U. S. policy in Vietnam. They also joined in demanding more effective action on problems of the urban ghettos, through reforms in housing and business practices and greater job opportunities for minority groups.

Response to World Affairs. Jewish groups in the United States and elsewhere mustered immediate and extensive support for Israel in the Israeli-Arab war in June. Some Jewish leaders criticized Christians and other groups for not supporting Israel more forcefully. Many did support Israel, but others stressed the complexities of responsibility on both sides. The Israeli government announced a policy of free access to religious shrines in Jerusalem for all.

Muslim leaders expressed strong support for the Arab side in the conflict. There were reports of oppression of Muslims in mainland China. Militant Buddhist groups in South Vietnam pressed for greater recognition by the newly elected government there. In Burma the government curtailed Buddhist educational activities. In Japan, Kameito, political arm of the Soka Gakkai Buddhists, won 25 seats in the House of Representatives in addition to 20 held in the House of Councillors. In Korea activities of this group and of Tenri, one of the many sects that have achieved prominence in postwar Japan, were criticized for their pro-Japanese orientation. In India liberal and conservative Hindu groups were politically active in opposing some aspects of government policy. The 8th Pentecostal World Congress in Rio de Janeiro underscored one of the century's fastest-growing religious movements, now claiming 12 million members in 90 countries.

In October, Ecumenical Patriarch Athenagoras I, senior prelate of Orthodox Christianity, visited Pope Paul VI at the Vatican and participated in ceremonies in St. Peter's Basilica. Pledges were exchanged to intensify efforts to end the 1,000-year-old schism between the two churches. Roman Catholics joined Protestants in marking the 450th anniversary of the start of the Lutheran Protestant Reformation.

Changing Concepts. The 3d World Congress of the Lay Apostolate, meeting in Rome, requested the

Roman Catholic Church to restrict its pronouncements on birth control and leave solutions to the problem of planned parenthood to the consciences of believers, while expressing support for measures aimed at world population control. The congress also called on economically advanced nations to allocate 1% of their gross national product to the aid of developing countries. The 62d General Convention of the Episcopal Church in the United States, meeting in Seattle in September, allocated nearly $2 million to aid in solving urban ghetto problems.

The first synod of Roman Catholic bishops met in Rome in October to implement the policy of collegiality approved by Vatican Council II. Earlier, the pope announced a reorganization of the Roman Curia to give it broader national representation and less direct power in church affairs.

The United Presbyterian Church in the U. S. A., at its 179th General Assembly in Portland, Oreg., in May, adopted a new confession of faith, adding a contemporary expression of belief to historic church creeds. Other Christian groups, through study and publication, sought new forms of expression of faith relevant to what many call a "post-Christian era."

J. A. Martin, Jr.
Columbia University

PROTESTANTISM

Protestant churches throughout 1967 were engaged in resolving a wide range of issues related to their internal affairs and to their witness to the human community. Protestants also took occasion on October 31 to commemorate the 450th anniversary of the Lutheran Reformation. A climaxing ceremony was held at Wittenberg on the site where Martin Luther nailed his theses to the church door in 1517.

Social Issues. The dominant social issues during the year were war and peace, racial and civil strife, and world hunger. Some 2,400 ministers and lay people attended a seminar in Washington, D. C. (January 31-February 1), designed to express their concern over U. S. participation in the Vietnam conflict. An Anglican bishop of South Africa (C. Edward Crowther) resigned from his pastorate after being deported by the South African government for his outspoken opposition to the country's policy of racial separation (apartheid).

Members of the Taizé community, a Protestant religious order based in France, began, along with several Franciscans, a mission in a Negro slum area of Chicago. Ceremonies in San Francisco in February marked the cumulative total of 1 billion pounds of relief goods that have been sent overseas by the National Council of Churches during the 20 years it has engaged in relief work. In a symbolic action of concern for human values, Horace Donegan, Episcopal Bishop of New York, announced that construction would be halted on the Cathedral of St. John the Divine, New York City, until the plight of the destitute people in the surrounding neighborhood was alleviated.

EUGENE CARSON BLAKE, general secretary of the World Council of Churches since 1966, spoke out strongly during 1967 on behalf of Christian unity and world peace. In April he declared that U. S. policy in Vietnam constituted a "danger to human survival." During the Middle East crisis in June he took part in discussions to promote a peace settlement and to safeguard the holy places in Jerusalem. His assertion that "God is strictly nonsense in the popular mind today" gave rise to considerable controversy.

Blake was born in St. Louis, Mo., on Nov. 7, 1906. He studied at Princeton University, New College, Edinburgh, Scotland; and Princeton Theological Seminary (Th.B., 1932). He taught at a Christian college in India and later served as an assistant pastor in New York City and as a pastor in Albany, N. Y., and Pasadena, Calif. From 1954 to 1957 he was president of the National Council of Churches.

Religious freedom of Protestants was infringed on in several countries during 1967. Baptists in the Soviet Union suffered persecution and arrest. Spain's new statute on religious liberty (June 26) proved highly unsatisfactory to Protestant groups, who are allowed to register only as "civil associations," not as churches. Many churches also felt pressures exerted on them due to political unrest in South Africa, Rhodesia, and Greece.

Church Unity. Further movement toward church unity was everywhere evident during the year. The World Council of Churches held two important summer meetings in anticipation of its fourth assembly in 1968. The triennial meeting of its Commission on Faith and Order brought Protestant and Orthodox church leaders to Bristol, England, and the 20th meeting of its Central Committee was held at

EASTFOTO

MARTIN LUTHER'S house in Wittenberg, East Germany, is visited by D. Marcel Pratavand of France (*left*), secretary-general of the World Federation of Reformed Churches, and other Lutherans from the West on the 450th anniversary of the Lutheran Reformation.

Heráklion, Crete (Greece). In the Netherlands a new council of churches was formed. It included the two largest and previously nonparticipating churches—the Roman Catholic Church in the Netherlands and the Gereformeerde Kerken (largest Protestant church in the country).

American conservative Christians gathered in Los Angeles for the 25th anniversary convention of the National Association of Evangelicals. At Expo 67 in Montreal a Christian pavilion was sponsored by eight Protestant, Orthodox, and Catholic churches, representing 95% of the Christian population of Canada. In November, Athenagoras I, the ecumenical patriarch of the Eastern Orthodox Church, paid an official visit—the first such visit in Christian history—to the Archbishop of Canterbury, Arthur Michael Ramsey, in England.

There were 46 church union negotiations in progress during 1967, involving 121 different churches in 29 countries of six continents. One of the most comprehensive negotiating bodies, the Consultation on Church Union (U. S. A.), held its sixth plenary meeting at Cambridge, Mass., in May. The COCU received the Christian Methodist Episcopal Church as the tenth participating church in the negotiations and discussed problems related to the structure of a united church.

Among the Denominations. The General Assembly of the United Presbyterian Church in the U. S. A. met in Portland, Oreg., and adopted The Confession of 1967, the first new Presbyterian creed to be promulgated in 320 years. The International Convention of the Christian Churches (Disciples of Christ) met at St. Louis, Mo., in October 1967. The triennial General Convention of the Protestant Episcopal Church met in Seattle, Wash. The 8th Mennonite World Conference brought representatives from 33 countries to Amsterdam, Netherlands.

Within pastoral circles there were two changes of note during the year. Robert J. McCracken resigned as pastor of the Riverside Church (interdenominational) in New York City because of ill health. The Riverside is an influential church with close ties to nearby Columbia University. King Gustaf VI Adolf of Sweden named Bishop Ruben Josefson archibshop of Uppsala and primate of the Church of Sweden (Lutheran).

PAUL A. CROW, JR.
Lexington Theological Seminary

POPE PAUL VI widened his efforts for world peace during 1967 with visits to Fátima, in Portugal, and Istanbul, Turkey. At the Fátima shrine on May 13, he spoke of the necessity for world peace. In Istanbul, on a historic first visit (July 25–26), he joined Athenagoras I, patriarch of the Eastern Orthodox Church, in prayers for peace and reunion. The pope reiterated his church's concern for the poor of the world in a March 28 encyclical, *Populorum progressio*. Noted visitors to the Vatican in 1967 included Soviet President Podgorny, U. S. President Johnson, and UN Secretary-General U Thant.

Giovanni Battisa Montini was born in Concesio, near Brescia, Italy, on Sept. 26, 1897. Ordained on May 29, 1910, he served in the Vatican secretariat of state until Dec. 12, 1954, when he was named archbishop of Milan. He was made a cardinal on Dec. 15, 1958, and elected pope on June 21, 1963.

ROMAN CATHOLICISM

A worldwide Year of Faith began, by papal proclamation, on the Feast of Saints Peter and Paul (June 29), the 19th centenary of whose martyrdoms was commemorated in 1967. During the year Pope Paul VI undertook new journeys outside the Vatican walls, and the church continued to implement the far-reaching changes inaugurated by Vatican II.

Pope Paul VI. Two air trips increased to six the number of the pope's foreign journeys since his election. On May 13 he flew to Fátima, Portugal, where he preached before an immense throng of pilgrims on a favorite theme: world peace. (On December 16 he repeated his plea for world peace, adding a clear distinction between peace and pacifism.) At Fátima he met Lúcia dos Santos, now a Carmelite nun, only survivor of the three shepherd children whose reported visions 50 years ago led to the establishment of this Marian shrine.

The year's most significant ecumenical encounter occurred at Istanbul during Paul VI's pilgrimage to Turkey (July 25–26), when he conversed with Athenagoras I, patriarch of the Eastern Orthodox Church. At the Orthodox cathedral, the two church leaders joined in prayers for reunion and peace. The papal party also journeyed to Ephesus, traditionally viewed as the final home of the Blessed Virgin Mary. Athenagoras returned the papal visit by going to Rome (October 26–28).

WIDE WORLD

POPE PAUL VI pays homage to Our Lady of Fatima, May 13, before a throng of pilgrims who had assembled in the Basilica at Fátima, Portugal.

U. S. CHURCH MEMBERSHIP, 1966*

Religious Body	Members
Adventists, Seventh-day	374,433
American Carpatho-Russian Orthodox Greek Catholic Church	104,000
Apostolic Overcoming Holy Church of God	75,000[1]
Armenian Church, Diocese of America	136,000
Assemblies of God	576,058
Baptist Association, American	731,000
Baptist Association, North American	200,000
Baptist Association of America, Conservative	325,000[2]
Baptist Churches, General Association of Regular	170,299
Baptist Convention, American	1,538,988
Baptist Convention in the U. S. A., National Primitive	1,225,000
Baptist Convention, Inc., Progressive National	521,581
Baptist Convention, Southern	10,947,389
Baptist Convention, U. S. A., Inc., National	5,500,000[3]
Baptist Convention of America, National	2,668,799[4]
Baptist Evangelical Life and Soul Saving Assembly of U. S. A., National	57,674[5]
Baptists, Free Will	178,450
Baptists, General	64,498
Baptist General Conference	91,206
Baptist General Conference, North American	53,742
Baptists, Primitive	72,000[6]
Baptists, United	63,641[7]
Baptist Church, United Free Will	100,000[8]
Brethren, Church of the	191,402
Buddhist Churches of America	92,000[2]
Bulgarian Eastern Orthodox Church	86,000[9]
Christian and Missionary Alliance	68,829
Christian Churches (Disciples of Christ), International Convention	1,894,927
Christian Congregation, The	44,914
Church of Christ, Scientist	268,915[10]
Church of God, The	73,868[2]
Church of God (Anderson, Ind.)	143,364
Church of God (Cleveland, Tenn.)	220,405
Church of God in Christ	425,500[2]
Church of the Nazarene	350,882
Churches of Christ	2,350,000[2]
Congregational Christian Churches, National Association of	110,000
Episcopal Church, The	3,429,153
Evangelical Convenant Church of America	64,950
Evangelical United Brethren Church	732,377
Evangelical Lutheran Synod, Wisconsin	358,466[11]
Friends, United Meeting	70,673
Greek Orthodox Archdiocese of North and South America	1,770,000[2]
Independent Fundamental Churches of America	101,435
International Church of the Foursquare Gospel	89,215[12]
Jehovah's Witnesses	330,358[2]
Jewish Congregations	5,725,000[2]
Latter-day Saints, Church of Jesus Christ of	2,480,899[13]
Latter Day Saints, Reorganized Church of Jesus Christ of	182,251
Lutheran Church, The American	2,566,581
Lutheran Church in America	3,147,959
Lutheran Church-Missouri Synod	2,729,897
Lutheran Synod, Wisconsin Evangelical	358,466[11]
Mennonite Church	81,248
Methodist Church	10,310,619
Methodist Episcopal Church, African	1,166,301[5]
Methodist Episcopal Church, Christian	466,718[2]
Methodist Episcopal Zion Church, African	1,100,000[2]
Methodist Church of North America, Free	60,175
Moravian Church in America	60,643
North American Old Roman Catholic Church	18,954
Pentecostal Church of God of America, Inc.	115,000
Pentecostal Church, Inc., United	125,000[2]
Pentecostal Holiness Church, Inc.	65,040
Polish National Catholic Church of America	282,411[14]
Presbyterian Church, Cumberland	88,248
Presbyterian Church in the U. S.	955,402
Presbyterian Church in the U. S. A., The United	3,298,583
Reformed Church, Christian	275,530
Reformed Church in America	377,671
Roman Catholic Church	46,864,910
Romanian Orthodox Episcopate of America	50,000
Russian Orthodox Catholic Church in America Patriarchal Exarchate	152,973[2]
Russian Orthodox Church Outside Russia	55,000[7]
Russian Orthodox Greek Catholic Church of America	56,549
Salvation Army	294,201
Serbian Orthodox Church in the U. S. A. and Canada	65,000
Spiritualists, International General Assembly of	164,072[4]
Syrian Antiochan Orthodox Church	110,000[12]
Triumph the Church and Kingdom of God in Christ	43,500[2]
Ukrainian Orthodox Church of U. S. A.	87,475
Unitarian Universalist Association	166,622[2]
United Church of Christ	2,063,481[15]

* Mainly for the calendar year 1966 or a fiscal year ending in 1966. [1] 1956. [2] 1965. [3] 1958. [4] 1956. [5] 1951. [6] 1950. [7] 1955. [8] 1952. [9] 1962. [10] Data not reported; figure given here from *U. S. Census of Religious Bodies, 1936.* [11] 1964. [12] 1963. [13] World-wide statistics. [14] 1960. [15] Includes members of Congregational Christian and Evangelical and Reformed churches. (Source: National Council of Churches of Christ in the U. S. A., *Yearbook of American Churches for 1968.*)

The first visit of a Soviet chief of state to the Vatican occurred on January 30, when Nikolai V. Podgorny, president of the USSR, ended a 7-day trip to Italy by talking for an hour with Paul VI about peace, religious freedom, and the condition of the church in the Soviet Union. U. S. President Johnson returned from attending Australian Prime Minister Harold Holt's funeral by way of Rome, where he conferred with the pope about peace in Vietnam.

The Church. To help offset a growing shortage of priests, Paul VI issued on June 27 a *motu proprio*, *Sacrum diaconatus ordinem*, which restored the permanent rank of ordained deacon in the Latin rite for both single and married men. New norms for gaining indulgences and a decrease in their number were contained in the apostolic constitution *Indulgentiarum doctrina* (January 1). The encyclical *Populorum progressio* (March 28) dealt with social and economic problems. In the face of mounting pressure to permit the marriage of Latin rite priests, Paul VI on June 23 published his sixth encyclical, *Sacerdotalis caelibatus*, reaffirming the church's stand on priestly celibacy.

On May 29 the pope named 27 cardinals, raising

PARIS MATCH FROM PICTORIAL

JEWS pray before the "Wailing Wall" in the Old City of Jerusalem following the capture of this sector during the June war. The Wall, last remnant of Solomon's Temple, is probably the holiest monument in the Jewish religion.

the total in the Sacred College of Cardinals to a new high of 120. Of the new cardinals, 12 were Italian (including Egidio Vagnozzi, apostolic delegate to the United States). Four of the new cardinals were from the United States; three were from France; and one each were from the Netherlands, Poland, Germany, Switzerland, Monaco, Indonesia, Bolivia, and Argentina. In November, Cardinal Paul Léger resigned as archbishop of Montreal to care for lepers in Africa, but retained his rank of cardinal.

The month-long first meeting of the Synod of Bishops, which was created in 1965, convened in Rome on September 29. In closed sessions some 200 delegates from six continents discussed doctrines of faith, revision of the Code of Canon Law, seminaries, mixed marriages, and the liturgy. Meeting in Rome at the same time (October 11–18) was the 3d World Congress of the Lay Apostolate, attended by nearly 3,000 laymen. Further evidence of the laity's increasing prominence came in January with the creation of two new agencies in the Roman Curia: the Council for the Laity, to promote the lay apostolate; and the Pontifical Commission for Studies of Justice and Peace, primarily for research.

Changes in the Curia. The first major reorganization of the Roman Curia since 1908 was decreed on August 15 in the apostolic constitution *Regimini Ecclesiae universae,* to take effect on March 1, 1968. Changes include the elimination of some departments, the creation of others, and alterations in the name and functions of several existing ones. Henceforth all sacred congregations will enjoy equal juridical status. The most important figure in the curia will be the papal secretary of state. He will also head the Sacred Council for Public Affairs. Cardinals, who will head all departments, are to have 5-year renewable terms, which will end with the pope's death. Internationalization of the curia will be promoted by including diocesan bishops throughout the world in the congregations. Another curial innovation was the appointment of five nuns to curial posts, hitherto an exclusively male preserve

(See also ROMAN CATHOLIC CHURCH.)

JOHN F. BRODERICK, S. J.
Weston College

JUDAISM

The single event that dominated American Jewish life in 1967 was the Israeli-Arab war. There was little doubt as to where the sympathies of most Americans—Jews and non-Jews—lay. Spontaneous expressions of support for Israel came from practically all segments: the churches, intellectuals, students, businessmen, politicians, and the man in the street. A poll, conducted while the fighting was still in progress, found that half of all Americans registered substantial pro-Israel sentiment.

While many American non-Jews joined in the outpouring of financial aid to Israel, the heaviest support naturally came from the Jewish community. It was considered to be the greatest philanthropic response in Jewish experience as well as in the history of private philanthropy in the United States. Both affiliated and nonaffiliated participated, and the person of modest means often did so at severe sacrifice. Thousands of young people, anxious to go to Israel to fill civilian jobs left vacant by Israelis serving in the army, crowded the offices of the Jewish Agency and the Israeli consulate. Two hundred managed to leave before the U. S. State Department barred travel to the area.

KEYSTONE

ATHENAGORAS I (*left*) is greeted in London by Arthur Michael Ramsey, archbishop of Canterbury, in November.

The Jewish Heritage. This mass expression of solidarity was an encouraging sign of the American Jew's commitment to his heritage, long a matter of concern to the organized community. A number of agencies urged improved methods of Jewish education, teacher training, and recruitment.

In November the Council of Jewish Federations and Welfare Funds (CJFWF) launched a program designed to involve Jewish college students in the work of federations and agencies dealing with issues of primary concern to Jewish youth, including participation in social action in such fields as civil rights and anti-poverty and public welfare legislation. The National Jewish Welfare Board, the largest Jewish service agency, began a reappraisal of communal needs and their potential effects on the work of the more than 300 Jewish community centers, with over 700,000 members, throughout the country. The goal is to correct what is felt to be the general failure of these institutions to offer programs with meaningful Jewish content.

Drive Toward Unity. The ongoing movement to bring unity among Reform, Conservative, and Orthodox Jews continued. The president of the New York Board of Rabbis, which comprises 900 rabbis of the three movements, appealed in January to all congregants to recognize the existence and the right of existence of groups other than their own. An outstanding effort to reverse the trend toward sectarianism in Judaism was the institution in the fall of a course at the Jewish Theological Seminary on new developments in contemporary Jewish life, offered alternately by scholars representing the Orthodox, Conservative, and Reform movements.

Ecumenism. Interfaith dialogue in the spirit of the Vatican Council II declaration on the Jews and Judaism made important strides. Augustin Cardinal Bea, in March, told a group of American Jewish communal leaders that he was pleased with the progress of ecumenism in the United States, particularly with the meeting of Roman Catholic and Jewish representatives at Philadelphia's St. Joseph's College, which made plans to implement the decrees.

The Jewish community lauded as enormously significant the guidelines issued in mid-March to all U. S. Roman Catholic bishops by the Bishops' Commission for Ecumenical and Interreligious Affairs. The guidelines asked for Catholic initiative in fostering interfaith understanding, for dialogue "marked by a genuine respect for the person and freedom of all participants," and for the removal from Catholic texts of passages "not in accord with the content and spirit" of the Ecumenical Council decrees.

Population. The estimated world Jewish population at the beginning of 1967 was 13,538,000. Some 5,720,000 Jews lived in the United States, and 980,000 were spread through the rest of the continent; about 4,025,000 were in Europe, including 2,543,000 in the Soviet Union; approximately 2,460,000 in Asia; 238,000 in Africa, and 74,000 in Australia.

MARTHA JELENKO
Associate Editor, "American Jewish Year Book"

EASTERN ORTHODOXY

The year 1967 witnessed many important events in the movement for Christian unity between Eastern Orthodoxy and the Roman Catholic and other churches. The major event was the exchange of visits between Ecumenical Patriarch Athenagoras I and Pope Paul VI.

Orthodoxy in America. The primate of the Greek Orthodox Church of North and South America, Archbishop Iakovos, met with Pope Paul VI, on February 27, for the third time. The archbishop, who is a president of the World Council of Churches, apprised the pope of decisions reached at the World Council's Executive Committee meeting in London. As chairman of the Standing Conference of Canonical Orthodox Bishops in the Americas, Archbishop Iakovos asked for the internationalization of Jerusalem immediately following the end of the Israeli-Arab war. He and other members of the Conference also sought international guarantees for the safety of religious shrines in the Holy Land.

KING FAISAL (*center*) is joined by members of his cabinet on a religious pilgrimage to the Holy Mosque in Mecca.

UPI

In an unprecedented gesture of ecumenism, Archbishop Iakovos conducted a Trisagion, or requiem service, before the bier of Francis Cardinal Spellman, Roman Catholic archbishop of New York, on December 5 in St. Patrick's Cathedral. It was believed to have been the first regular Greek Orthodox service held in a Roman Catholic church since the separation of the churches.

Ecumenical Exchanges. In July, Pope Paul VI visited Patriarch Athenagoras I, senior prelate of Eastern Orthodox churches, in Constantinople (Istanbul). The two spiritual leaders prayed together in the Patriarchal Church of St. George. The patriarch then visited the Orthodox patriarchates of Serbia, Rumania, and Bulgaria, where he was welcomed with honors by the primates and their governments. Athenagoras postponed until April 1968 his planned visit to the patriarchate of Moscow at the request of Russian Patriarch Alexios. On October 26 Athenagoras returned the pope's visit, joining the pontiff in a historic ceremony in St. Peter's Basilica, in Rome. The two prelates later issued a communiqué noting the progress made in the movement for Christian unity.

After leaving Rome, Athenagoras I visited the headquarters of the World Council of Churches in Geneva, where he was greeted by the Rev. Eugene Carson Blake, its general secretary. The patriarch also called at the Geneva headquarters of the Lutheran World Federation, where he expressed the hope that the dialogue between the Lutheran and Eastern churches would be furthered. Subsequently, Athenagoras visited the Most Rev. Arthur Michael Ramsey, archbishop of Canterbury, in London.

Notable changes in the Orthodox hierarchy in 1967 were the consecration of Bishop Andrew Kuschak as primate of the Ukrainian Orthodox Church of America, and the election of Archbishop Ieronymos as primate of Athens and all Greece, to replace Archbishop Chrysostomos, whom the new Greek government forced to retire.

Membership. There are some 20 Eastern Orthodox jurisdictions in America, including Albanian, Bulgarian, Greek, Carpatho-Russian, Rumanian, Russian, Serbian, Syrian, and Ukrainian, which together have some 6 million communicants. The largest of these, with an estimated 2 million members and over 450 churches, is the Greek Orthodox Archdiocese of North and South America.

BASIL G. VASILIADIS
Greek Orthodox Archdiocese of
North & South America

ISLAM

The event of greatest impact on Islam in 1967 was the short but destructive Israeli-Arab war of June 5–10, from which Israel emerged as the victor. The military conflict soon subsided, but all of the fundamental issues remained to be settled at the end of the year. Israel's occupation of several thousand square miles of Arab territory created a host of new questions, not the least of which was the disposition of Arabs living in the area. However, the crises and war of May and June did temporarily blur the old pattern of tensions among the Arab states as they united against Israel, which they consider a mutual enemy.

Islamic Solidarity. Early in the year, King Faisal of Saudi Arabia made a serious effort to push the concept of Islamic solidarity and worldwide cooperation. Addressing the thousands of pilgrims to Mecca in March, Faisal described the conflict in Yemen, between royalists and republicans—with the United Arab Republic supporting the republicans and Saudi Arabia backing the royalists—as a Muslim tragedy because it pitted believer against believer. He reiterated his call for peace in Yemen and for an Islamic "summit conference" that would bring together Muslim leaders from all over the world to discuss a possible resolution of the conflict. The Arab defeat in the Israeli–Arab war brought a removal of most UAR troops from Yemen.

In May 1967, India elected its first Muslim president, Zakir Husain. With the support of the Congress party, he was elected, despite the fact that Hindus outnumbered Muslims by 7 to 1. Husain's success called attention to the diverse directions of Muslim life in the Indian subcontinent. Even while the Muslims of Pakistan are striving to erect an Islamic state, Muslims in India are hoping to maintain their identity within a predominantly Hindu secular state.

Missionary Activity. There was significant Muslim action early in 1967 in support of Islamic missionary activity in non-Muslim countries. The Council of Ministers of Kuwait announced a substantial grant to support the Islamic center in Japan. In February, Saudi Arabia contributed more than $200,000 toward the building of a large mosque in New York City that will cost in excess of $6 million when completed. Kuwait and Libya also are making large contributions to the building fund.

Overpopulation has become a major problem in several Muslim countries. Muhammad Tawfiq Uwaydah, secretary-general of the supreme council for Islamic Affairs in the United Arab Republic, declared in February that more than 90% of the religious authorities in Egypt believe that the teachings of Islam support birth control.

W. Paul McLean
Southern Methodist University

ORIENTAL RELIGIONS

The inter- and intra-faith amity that had marked the Asian struggles for freedom from colonialism in recent decades seemed in 1967 to be losing ground. Sectionalism was on the increase, and there was an accompanying intensification of religious conflict.

Hinduism. In the February elections in India the Congress party was barely returned to power. To gain greater support among India's 60 million Muslims, as well as to maintain the principle of separation of religion and politics, Prime Minister Indira Gandhi supported Zakir Husain for the presidency of India. By vote of the state assemblies and national parliament, Husain became the first Muslim in the predominantly Hindu nation to hold its nominally highest office. Outbreaks continued, however, among Hindus, Muslims, and Sikhs, with some loss of life. Sikhs in Calcutta rioted over the alleged desecration of a Sikh temple; Muslims in Nizamabad protested the defeat of their candidate at the polls by a Hindu; and a Hindu mob demonstrated over a Hindu-Muslim marriage in Srinagar (Kashmir).

Throughout the year Hindu holy men continued to seek an absolute ban on the slaughter of cows. Some 175 million freely roaming sacred cattle drain the scant national food supply, and it is a sore point with Hindus that Muslims annually kill and eat an estimated 1 million cows. Holy men fasting "to the death" desisted only when Prime Minister Gandhi promised a government study of a ban.

UPI

HINDUS in Srinagar, Kashmir, demonstrate against the marriage of a Hindu girl to a Muslim boy in September.

Buddhism. In Ceylon a government-imposed observance of poya day, the Buddhist holy day, instead of Sunday caused confusion, since poya day can fall on any day of the week. In Burma regional groups were in revolt—some on religious, others on political, grounds—against the government, which is said to control only 65% of the country. In South Vietnam the militant Buddhists remained quiet until the September elections. Then, led by Thich Tri Quang, 700 monks and nuns demonstrated in Saigon against President Nguyen Van Thieu's recognition of Thich Tam Chau, a moderate Buddhist, as spokesman for South Vietnam's United Buddhist Church. When the protest was ignored, Quang maintained a solitary vigil until October 10, but gave up after receiving government assurances of equity for all groups.

In Japanese elections at the end of January, the conservative, tightly organized Komeito (political arm of the Soka Gakkai, a Nichiren sect) gained 25 seats in the lower house of parliament. This, combined with Komeito's 20 seats in the upper house, made it Japan's fourth-strongest party.

Chinese Religions. Red Guards continued to plaster Confucian and Buddhist shrines with derogatory posters. But, strangely, Mao Tse-tung was reported to be urging his niece to study in Britain so that she could make new translations of Buddhist classics.

John B. Noss
Author of "Man's Religions"

REPUBLICAN PARTY. See Political Parties.

RESPIRATORY DISEASES

Although infectious diseases, particularly acute viral respiratory infections, are generally considered to be mild, they still constitute a major health threat to people throughout the world. In the United States alone, the population suffers more than 250 million acute infections a year, resulting in 850 million man-days of restricted activity and 108 million man-days lost from work.

It is estimated that in 1966 there were approximately 110,000 deaths due to microbial agents, most of which enter the body through the respiratory tract. Two of the most common respiratory infections, influenza and pneumonia, account for approximately 70,000 deaths a year. In recent years, the annual death rates from these diseases were higher in the western United States, particularly in California. This was due to the fact that in 1965–66, influenza virus of the type A-2 hit the western population more heavily than other parts of the country. Then, in 1966–67, California and Arizona were heavily hit with influenza outbreaks due to the influenza type B virus.

Because epidemic influenza outbreaks have generally been mild throughout the eastern, central, and southern United States during the past two years, it was predicted that more severe outbreaks would occur in the winter of 1967–68. The first documented outbreak in 1967 involved 3,000 of the 18,500 students at Western Michigan University between October 23 and November 10, and the causative virus was found to be of the type A-2. Later, during the winter months, a major influenza outbreak occurred throughout the northeastern states. This epidemic was also due to the type A-2 virus.

Influenza Vaccines. The effectiveness of influenza vaccines depends on the degree of similarity between the strains of viruses incorporated into the vaccine and the types of viruses prevalent in the community. In 1967, two types of vaccines were available: one containing A-2 and B viruses and one containing types A, A-1, A-2, and B strains.

Although influenza virus vaccines are effective, the problem of controlling respiratory tract infections is still immense because there are several immunologically different groups of infective agents that produce respiratory diseases. In addition to the more than 200 viruses and mycoplasma organisms, there are several groups of bacteria (such as pneumococci, *Hemophilus influenzae*, and streptococci) and various fungal agents (such as *Histoplasma capsulatum* and *Coccidioides immitus*) that may cause upper as well as lower respiratory tract infections that cannot be differentially distinguished from one another. Recent epidemiological studies have shown that several different viruses and bacteria may be operating simultaneously in family, school, military, and industrial populations.

Another recent finding concerning influenza immunization is that the presence of antibodies in nasal secretions may be an important protective mechanism against respiratory virus infections. This suggests that immunization directly via the respiratory tract—through the use of aerosols or vaccines to provoke the formation of local nasal antibodies—may be more effective than the administration of vaccines through subcutaneous injections.

Virus Prevalence and Spread. The worldwide prevalence of known respiratory viruses is being studied by the World Health Organization (WHO). It is well known that individuals living in different urban areas throughout the world are infected with the same types of respiratory viruses. WHO investigators have shown that children and young adults living in certain isolated areas (North American Eskimos, South African Hottentots, and Pacific Micronesian islanders), where contact with other people is infrequent, have the same high proportion of respiratory infections as people living in urban areas.

The method by which viruses spread from person to person, from town to town, from city to city, and from country to country is not clearly understood. Studies indicate that an individual suffering from an upper respiratory virus infection soils his hands, clothing, and his immediate environment with secretions from his nose and mouth. Through coughing, talking, and sneezing, he contaminates the air with tiny droplets containing the infective viruses as well as bacteria. The survival of the viruses in the air or on dust particles depends largely on the type of virus. Most types survive longer under a constant temperature and low humidity.

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RETAIL STORE SALES

Retail sales in 1967 rose 3% to a record annual rate of $313.3 billion, compared with $303.7 billion for 1966. In the same period, sales at durable goods stores advanced 2%, from $97.8 billion to $99.7 billion. Meanwhile, sales at nondurable goods stores rose 4% from $205.9 billion to $213.7 billion.

Although sales in 1967 continued to increase, the rate of advance was less than the gains during each of the five previous years. Previous annual gains had averaged over 5%.

Commodity prices at the retail level rose 2% from June 1966 to June 1967, compared with a 1% increase in average annual prices for the years 1962 through 1965, and an increase of 2.5% in 1966 over 1965.

Sales. As in 1966, consumers during the first half of 1967 spent 60% of their income (after taxes) at retail stores—20% at durable goods stores and 40% at nondurable goods stores. Purchases per capita in the first half of 1967 were equal to $1,560, at a seasonally adjusted annual rate.

SALES OF RETAIL STORES, 1965–1967[1]
(In millions of dollars)

	1965	1966	1967[2]
All retail stores	283,852	303,672	313,332
Durable goods stores[3]	93,718	97,812	99,654
Nondurable goods stores[3]	190,134	205,860	213,678
Durable goods stores:			
Automotive group	56,266	57,414	57,669
Furniture and appliance group	13,737	14,978	15,718
Lumber, building, hardware group	12,115	12,307	12,332
Nondurable goods stores:			
Apparel group	15,752	17,276	17,950
Drug and proprietary stores	9,335	10,148	10,862
Eating and drinking places	21,423	23,431	24,869
Food group	66,822	71,125	72,061
Gasoline service stations	21,765	23,102	24,062
General merchandise group	35,840	39,811	42,196
Department stores	23,421	26,094	27,697

[1] Data revised from previously published estimates. [2] Preliminary. [3] Includes estimates for other retail stores not shown separately. (Source: U.S. Department of Commerce.)

More than a quarter of all retail purchases were made at chain stores in the first half of 1967. These purchases totaled $83.5 billion, at a seasonally adjusted annual rate.

All major nondurable goods business reported increases in sales for 1967 over 1966. In durable goods, sales by the automotive group and the lumber-building-hardware group were unchanged but were outweighed by increases in sales of other durable goods stores.

Inventories. Retailers' inventories at the end of June 1967 totaled $36.1 billion, seasonally adjusted, down $200 million from June 1966. They were equal to 1.4 months of sales.

DOROTHEA S. JONES
Office of Business Economics
U. S. Department of Commerce

RHODE ISLAND

With the death on January 10 of U. S. Rep. John E. Fogarty, 53, Democrat of Rhode Island, the nation lost an ardent advocate of expanding federal activity in the field of public health, particularly medical research and aid to the mentally retarded. Representative Fogarty had been chairman of the House appropriations subcommittee handling health funds during most of the period 1949 through 1967. His death came shortly before he was to have been sworn in for his 14th term as representative of Rhode Island's Second District.

A special election to fill the vacancy caused by Representative Fogarty's death, the annual legislative session, and adoption of a proposed new state constitution by the Rhode Island Constitutional Convention were the major political events of the year.

UPI

RHODE ISLAND Gov. John Chafee (*left*), with other Republican leaders (*from left*) Gerald Ford, Ray Bliss, and Everett Dirksen, at a Washington meeting in December.

Special Election. In the special Congressional election, Democratic State Senator Robert O. Tiernan, of Warwick, narrowly defeated his Republican opponent, James DiPrete, Jr., mayor of Cranston. Although the election was held on March 28, the small margin in Tiernan's favor and the need to count nearly 2,000 absentee ballots held the final result in some doubt until April 7, when Tiernan was declared the winner with a plurality of 313 out of the nearly 114,000 votes cast. An independent candidate, the Rev. Albert Q. Perry, who campaigned for U. S. withdrawal from Vietnam, received less than 3% of the vote. In the primary on February 21 to choose the Democratic candidate, Tiernan defeated former Gov. John A. Notte, Jr., by a vote of 12,235 to 10,953.

RHODE ISLAND • Information Highlights

Area: 1,214 square miles (3,144 sq km).
Population: 901,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Providence, the capital, 195,000; Pawtucket, 80,500; Warwick, 75,500; Cranston, 72,000; Newport, 50,500; Woonsocket, 46,500; E. Providence, 44,500.
Government: *Chief Officers*—governor, John H. Chafee (Republican); lt. gov., Joseph H. O'Donnell, Jr. (R); secy. of state, August P. LaFrance (Democrat); atty. gen., Herbert F. DeSimone (R); treas., Raymond H. Hawksley; comm. of educ., William P. Robinson, Jr.; chief justice, Thomas H. Roberts. *Legislature*—General Assembly (convened Jan. 3, 1967): Senate, 50 members (15 Republicans, 35 Democrats); House of Representatives, 100 members (33 R, 67 D).
Education: *School enrollment* (1965–66)—public elementary, 93,000 pupils (3,364 teachers); public secondary, 67,000 pupils (3,268 teachers); nonpublic schools, 59,500 pupils (2,420 teachers); college and university, 33,741 students. *Public school expenditures* (1965–66)—$81,450,000 ($576 per pupil); average teacher's salary, $6,325.
Public Finance (fiscal year 1967): *Revenues*, $193,912,223 (4% sales tax, $48,955,928; motor fuel tax, $20,999,517; federal funds, $37,172,983). *Expenditures*, $201,795,555 (education, $47,298,596; health, welfare, and safety, $86,378,103; highways, $19,215,381). *State debt*, $177,002,039 (June 30, 1967).
Personal Income (1966): $2,730,000,000; average annual income per person, $3,047.
Public Assistance (fiscal year 1967): $37,455,094 to 40,976 recipients (aged, $8,078,822; dependent children, $14,801,884).
Labor Force (employed persons, Aug. 15, 1967): *Agricultural*, 3,100; *nonagricultural* (wage and salary earners), 335,300 (38% manufacturing, 18.4% trade, 14.9% government). *Unemployed persons* (July 1967)—13,400.
Manufacturing (1965): Value added by manufacture, $1,193,646,000 (textile mill products, $167,913,000; primary metals, $129,735,000; nonelectrical machinery, $134,681,000; electrical machinery, $75,560,000; fabricated metals, $80,561,000; food and products, $76,813,000).
Agriculture (1966): *Cash farm income*, $22,397,000 (livestock, $11,977,000; crops, $10,347,000; govt. payments, $73,000). *Chief crops* (tons)—hay, 28,000; apples, 3,840.
Mining (1966): *Production value*, $3,947,000. *Chief minerals*—sand and gravel, stone.
Fisheries (1966): *Commercial catch*, 67,552,855 pounds ($5,211,012). *Leading species*—scup, 8,542,850 pounds ($1,004,960); yellowtail flounder, 5,855,137 pounds ($607,157); clams, 1,604,760 pounds ($799,418); northern lobsters, 1,598,959 pounds ($1,228,685).
Transportation (1967): *Roads*, 4,653 miles (7,487 km); *motor vehicles*, 454,058; *railroads*, 329.7 track miles (530 km); *airports with scheduled services*, 1.
Communications (1966): *Telephones* (1967), 454,300; *television stations*, 2; *radio stations*, 18; *newspapers*, 7 (daily circulation, Sept. 1966, 316,118).

Legislation. Republican Gov. John H. Chafee began his third 2-year term on January 3 and in his inaugural message to the General Assembly (legislature) stressed the need for a "substantial tax increase" to meet the rising costs of state government.

During its session, the Assembly raised the sales tax from 4% to 5% and imposed a 1% tax on realty transfers but rejected a proposal for a state income tax. The appropriation bill adopted by the lawmakers amounted to $180.6 million. Pay increases for state employees totaling $4.7 million were approved, as were an increase in the governor's salary from $25,000 to $30,000 and increases for the state's general officers elected in November 1968. The Assembly also authorized a revised plan for state aid to education, added hallucinogenic drugs to the coverage of the uniform narcotics drug act, raised the hourly minimum wage to $1.60 as of July 1968, enacted highway safety measures, and established a Council on the Arts.

Bond issues approved by the Assembly and subsequently approved by the voters of the state included $1.5 million to finance centers for the mentally retarded, $3.5 for junior college construction, and $2 million for a regional vocational high school.

Constitutional Convention. The state's Constitutional Convention, which began its deliberations in late 1964, adopted on December 4 a proposed new constitution that will be submitted to the voters on April 16, 1968. It represents the first extensive revision of the constitution in 125 years.

S. R. B.

WIDE WORLD

RHODESIAN PRIME MINISTER Ian Smith (*right*), together with the leader of the opposition, heads a procession opening the 11th session of parliament on April 19.

RHODESIA

Although considered an "outlaw nation" by much of the world, Rhodesia was nevertheless a fact of international life at the end of 1967. Having weathered a year of United Nations sanctions with little economic damage, the government of Prime Minister Ian D. Smith remained strong and showed no disposition to comply with Britain's continued pressure for constitutional changes guaranteeing African majority rule. Security forces were able to contain the nationalist guerrilla incursions.

Sanctions and Negotiations. The impasse continued between white-ruled Rhodesia and Britain, from which Rhodesia had unilaterally declared its independence on Nov. 11, 1965. Talks between Smith of Rhodesia and British Prime Minister Harold Wilson aboard the British cruiser *Tiger* in the Mediterranean on Dec. 2–3, 1966, were unproductive. The economic sanctions imposed by the U N Security Council on December 16 failed to bring down the Smith government. With oil shipments from South Africa and Portuguese Mozambique, and circuitous trade with France, Japan, and other countries, Rhodesia enjoyed apparent economic stability.

IAN DOUGLAS SMITH, prime minister of Rhodesia, continued in 1967 to maintain the independence of his country under the rule of its white minority. By March 1967 some 92 nations, including the United States, had suspended trade with Rhodesia in compliance with a UN Security Council resolution of December 1966. Rhodesia was also confronted by incursions of African nationalist guerrillas, allegedly from Zambia, and on August 30, Smith accused Britain of aiding these insurgents.

Smith was born in Selukwe, Southern Rhodesia, on April 8, 1919. He attended local schools and, after World War II combat service in the Royal Air Force, completed his education at Rhodes University in South Africa. In 1948 he entered the Southern Rhodesian Legislative Assembly, and in 1953 he joined the ruling United Federal party. He left the party in 1961 to found the right-wing Rhodesian Front, which came to power in 1962. Smith succeeded Winston Field as prime minister in April 1964.

Rhodesia has proved to be a political albatross for Britain. While holding firm to Britain's stand on "no independence before African majority rule," Wilson reopened negotiations with the recalcitran Smith government in 1967. In July, Wilson sen Lord Alport, a liberal member of the Conservative party and former high commissioner to the Federation of Rhodesia and Nyasaland, to talk wit Smith. On November 8–11, Commonwealth Secretary George Thomson visited Rhodesia. Neithe could find common ground with Smith.

Party Backs Smith. At the party congress in September, minority right-wing elements of the rulin Rhodesian Front failed to gain support for resolution designed to declare Rhodesia a republic and to increase its racial segregation. Smith easily stoppe the resistance and drew strong support for his slow moderate approach to reforming Rhodesia's constitution and racial policy. He got his party's agreemen to await the report of a government commissio studying constitutional reform. He told the 80 delegates, "There is no alternative. If we were t pause for one moment to consider any other suc alternatives that may be put before us, we would b stark, staring mad. We have set our course an from now on we must paddle our own canoe."

Guerrilla Attacks. Minor clashes occurred between Rhodesian forces and African nationalists i May, June, and July. A serious battle took plac

RHODESIA • Information Highlights

Area: 150,332 square miles (389,361 sq km).

Population: 4,400,000 (mid-1966 UN est.).

Chief Cities (1965 est.): Salisbury, the capital, 324,800; Bulawayo, 225,500.

Government: *Prime Minister*—Ian D. Smith (took office April 1964). *Parliament*—Legislative Assembly, 65 members.

Education: *Total school enrollment* (African only) (1964)—623,088 (primary, 610,268; secondary, 8,846; teacher-training, 2,883; technical, 452; higher, 639).

Finance (1967 est.): *Revenues,* $213,000,000; *expenditure* $228,000,000; *monetary unit,* pound (0.3571 pound equa U. S.$1).

Gross National Product (1966): $1,001,560,000.

Economic Indexes: *Industrial production* (1964), 129 (1958= 100); *cost of living* (1965), 110 (1960=100).

Manufacturing (metric tons, 1965): Sugar (1966), 260,000; c ment, 250,000; crude steel, 100,000; meat, 76,000.

Crops (metric tons, 1966): *Maize* (1964–65), 472,000; tobacc 105,500; citrus fruit (1963–64), 21,000; tea, 1,400.

Minerals (metric tons, 1965): Lithium minerals, 57,701 (ran 1st among world producers); coal, 3,504,000; iron or 1,287,300; chromite, 566,500.

Foreign Trade (1965): *Exports,* $442,000,000 (chief exports: u manufactured tobacco, $131,510,000; asbestos, $30,130,00 iron and steel, $18,138,000; clothing, $15,450,000); *impor* (1965), $236,000,000 (chief imports, 1965: transport equi ment, $45,388,000; nonelectrical machinery, $44,612,00 textile yarn and fabrics, $34,969,000). *Chief trading par ner* (1967): South Africa.

Transportation: *Roads* (1964), 47,754 miles (76,851 km); *mot vehicles* (1965), 135,000 (automobiles, 107,000); *railwa* (1965), 2,655 miles (4,272 km); *airline,* Central Afric Airways Corp.; *principal airport,* Salisbury.

Communications (1967): *Telephones,* 105,599; *television st tions,* 2; *television sets,* 45,000; *newspapers* (1965), 4 (dai circulation, 63,000).

August 8–31 at Wankie, 68 miles (109 km) south of the Zambian border. Rhodesian forces, reinforced for the first time by South African police, fought off about 80 well-trained and disciplined guerrillas equipped with modern Chinese and Russian weapons. The guerrillas drew Rhodesian forces into a serious ambush with resulting fierce hand-to-hand fighting. Some South African-born guerrillas penetrated Rhodesia on their way to South Africa only to be captured in Botswana. The Rhodesian forces lost 8 men; all the guerrillas were reported killed or captured.

Rhodesia angrily accused Zambia of harboring terrorists and Britain of culpable acquiescence, charges denied by both countries. The Wankie battle and military cooperation by South Africa, together with talk of a defense pact among white-ruled Rhodesia, South Africa, and Mozambique (with rumors of cooperation of economically dependent Malawi, Botswana, and Lesotho) marked the sharpest confrontation to date between black- and white-ruled Africa.

Budget and Trade. Minister of Finance John Wrathall portrayed Rhodesia's economy as "basically sound" at the end of 1966. His optimism was reflected in a record budget of $288 million for 1967–68, with no tax increase. Expenditures and revenue were estimated at $228 million and $213 million, respectively, with the difference to be made up by the surplus from the previous two years. Suggesting a 3-year tax concession to help farmers and tobacco growers, Wrathall noted that, compared with 1966, industrial production was up, retail and wholesale trade were gaining, African and non-African employment figures were up, building plans had doubled, and white immigration had increased markedly.

On September 23, Wrathall stated that British concerns were trading with Rhodesia "with the connivance of the British Board of Trade." He cited Rhodesia's imports of British goods for January through July 1967 at $16,438,000, some of this amount being traded through middlemen in unnamed countries. Commonwealth Secretary Thomson disputed this figure and angrily denied that British exporters were covertly sending large quantities of manufactured goods to Rhodesia.

The Times of London on July 7 commented that Rhodesia's economy could withstand the present sanctions "for some time to come," but noted that the drop in gross profits and investment and the failure of job opportunities to keep pace with the growth of the African population had "disturbing long-term implications."

Ties to South Africa. Although Rhodesians were apparently confident of their ability to survive and prosper, the government commissioned an economic study by Jan L. Sadie of South Africa's Stellenbosch University. The revolutionary report, released in October and under study by the government, would transfer Rhodesia's economy from the British to the South African orbit. It advocates trade agreements with neighboring countries, principally South Africa, family planning for Africans, and intensified immigration of about 12,000 Europeans a year. If adopted, the recommendations, particularly those regarding trade, would increase Britain's resentment of South African aid, which circumvents sanctions against Rhodesia, and would further jeopardize healing the breach between Britain and Rhodesia.

FRANKLIN PARKER
University of Oklahoma

ROCKEFELLER, Nelson Aldrich

Governor of New York: b. Bar Harbor, Maine, July 8, 1908

Gov. Nelson Rockefeller during 1967 was again among the forefront of projected Republican presidential candidates. However, he repeatedly denied any intention of seeking the Republican nomination in 1968, declaring his support of Gov. George Romney of Michigan.

Governor Rockefeller was inaugurated on January 2 for his third 4-year term. He campaigned long and hard during the year for his $2,500,000,000 transportation bond issue. Its approval by the voters on November 7 by a 3 to 2 margin was considered a personal triumph for the governor.

Governor. In his first bid for elective office, Rockefeller defeated incumbent Governor Averell Harriman in 1958. During Rockefeller's first year as governor, taxes were increased by $272 million as part of his plan to put the state on a "pay-as-you-go" basis.

Governor Rockefeller defeated the Democratic candidate Robert M. Morgenthau in 1962 by more than 500,000 votes. In 1965 a record budget of $3,480,000,000 was approved by the legislature along with a 2% sales tax, the first in the state's history. Rockefeller sponsored legislation in 1966 for a program known as Medicaid, which provides free medical care for the "medically indigent."

In his third bid for the gubernatorial office in 1966, he defeated Democrat Frank O'Connor with the aid of many traditionally Democratic labor unions.

Presidential Aspirations. Rockefeller was mentioned early in his career as governor as presidential timber. He withdrew his bid for the Republican nomination early in 1960, but entered the presidential primary campaign in January 1964. In June, however, he withdrew in favor of Gov. William Scranton of Pennsylvania.

Rockefeller's failure to win the nomination in 1964 seemed to end his presidential aspirations, and in July 1965 he announced that he would not be a candidate for the Republican nomination in 1968.

GOVERNOR NELSON ROCKEFELLER and his wife display their son, Mark Fitler, born in New York City in January.

WIDE WORLD

By the end of 1967, however, Rockefeller was again the favorite of many liberal Republicans, despite his insistence that he did not want to be president.

Background. Nelson Rockefeller is the grandson of John D. Rockefeller. He was graduated from Dartmouth College in 1930 and soon after married Mary Todhunter Clark. They were divorced in 1962 and in 1963 he married Margaret Fitler Murphy.

From 1940 to 1944, Rockefeller served as coordinator of inter-American affairs and in 1944–45 as assistant secretary of state for Latin America. During the Eisenhower administration he was undersecretary of health, education, and welfare.

LEO HERSHKOWITZ
Queens College, City University of New York

ROMAN CATHOLIC CHURCH

The most notable liturgical change introduced in the United States in 1967 was the substitution of English for Latin in the canon of the Mass, beginning on October 22. With this latest extension of the vernacular, only a few segments of the Mass remained in Latin. Some unauthorized, often bizarre, liturgical innovations persist despite official disapproval. They are part of the ferment excited by Vatican Council II, characterized in some quarters by impatience with tradition and open criticism of church authority.

One example of this new attitude was the strike in April by faculty and students at the Catholic University of America, Washington, D. C., over the administration's refusal to renew the contract of Father Charles Curran, a moral theology professor sympathetic to advanced ideas. Classes reopened only after Father Curran was reinstated.

Participation by priests in civil rights demonstrations reached its height in Milwaukee, Wis., where Father James E. Groppi frequently became embroiled with the police and white objectors to his open-housing demands (see also MILWAUKEE). A few priests fell afoul of the law because of their protest activities against the war in Vietnam.

The ecumenical movement continued to make rapid headway. In the Greater Boston area three Catholic institutions (St. John's Seminary and Boston and Weston colleges) and four Protestant divinity schools (Andover Newton and Episcopal theological schools and Boston and Harvard universities) joined forces in December to form the Boston Theological Institute.

It is no longer unusual to find Protestant and Jewish professors of theology in Catholic colleges. Catholic seminarians frequently take courses in Protestant seminaries, and the reverse. Protestant ministers grace Catholic pulpits and assist at liturgical services. Catholic priests preached in Protestant churches on the 450th anniversary of the posting of Luther's 95 theses that inaugurated the Reformation.

For the second consecutive year Catholic elementary school enrollment showed a slight decrease. There was a trend in Catholic colleges and universities toward greater control by laymen, not necessarily Catholic. A layman was named vice president of the Catholic University of America, and Notre Dame University reorganized its board of trustees to include 30 laymen and only 7 priests.

United States membership in the College of Cardinals rose to a new high of 9 on May 29 when 27 new cardinals named by Pope Paul VI included Archbishops John P. Cody of Chicago, John J. Krol

STUDENTS and faculty of Catholic University of America, Washington, D. C., cheer the administration's decision to rehire liberal professor Rev. Charles E. Curran.

UPI

HIS TIME
WE ARE
ETERMINED
NUNS FOR CURRAN
RELIGIOUS FREEDOM
has its foundation
in the very dignity
of the HUMAN PERSON
WE'VE
WON
ONE
BATTLE

of Philadelphia, and Patrick A. O'Boyle of Washington and Msgr. Francis J. Brennan of Shenandoah, Pa., dean of the Roman Rota. The number declined to 7 with the deaths of Joseph Cardinal Ritter of St. Louis on June 10 and Francis Cardinal Spellman of New York on December 2 (see SPELLMAN). The latter's funeral was attended by President Johnson and Vice President Humphrey. In an unprecedented display of ecumenism, Archbishop Iakovos, Greek Orthodox primate of North and South America, conducted a trisagion, or mourning service, before Cardinal Spellman's coffin in St. Patrick's Cathedral. The archbishop was also seated in the sanctuary during the funeral Mass, as were other Orthodox and Protestant ecclesiastics and Jewish rabbis.

Archbishop Luigi Raimondi was named apostolic delegate to the United States in June. He succeeded Egidio Vagnozzi, who was elevated to the cardinalate and assumed a post in the Roman Curia.

In 1967 there were an estimated 47 million Catholics in the United States. Church records showed 1,190,842 infant baptisms and 117,478 adult converts. For Latin rite Catholics there were 28 archdioceses, 117 suffragan dioceses, 1 abbey nullius, and 17,942 parishes served by 32 archbishops (8 cardinals), 229 bishops, 59,892 priests, 12,539 brothers, and 176,671 sisters. The 775,000 Eastern rite Catholics had 1 archdiocese, 6 dioceses, and 444 parishes.

The 305 Catholic colleges and universities enrolled 431,070 students; 2,341 high schools, 1,103,761; and 10,927 elementary schools, 4,370,000. A total of 205,687 full-time teachers included 12,108 priests, 1,197 seminarians, 5,962 brothers, 103,582 sisters, and 82,838 lay persons.

Catholics maintained 935 hospitals and sanatoria, with 163,820 beds; 234 orphanages and infant asylums, with 21,653 resident children and 25,203 others in foster homes; and 416 homes for the aged, with 37,345 guests. (See also RELIGION—*Roman Catholicism.*)

REV. JOHN F. BRODERICK, S. J.
Professor of Ecclesiastical History, Weston College

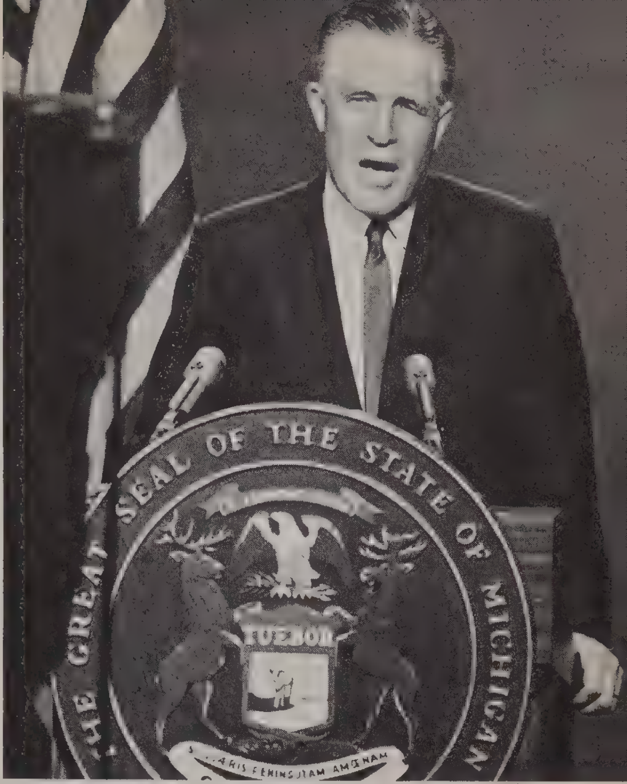
ROMNEY, George Wilchen

Governor of Michigan: b. Chihuahua, Mexico, July 8, 1907.

Governor Romney's campaign for the Republican presidential nomination began shortly after he started his third term as governor of Michigan on Jan. 2, 1967. After a vigorous but apparently unsuccessful effort to woo the primary voters of New Hampshire, he withdrew from the race on Feb. 28, 1968.

State Business. Although Romney was frequently away from Michigan in 1967 to further his candidacy for the Republican nomination for president, he engaged in a successful showdown with his somewhat recalcitrant legislature for enactment of a state income tax to avoid a deficit state budget. In July he was thrust into the national limelight when he called for federal troops to aid local law enforcement officials in quelling the Detroit riots.

In October, Romney called a special session of the legislature at which he strongly urged passage of an open housing law and pledged to fight for its adoption. This move was seen as an answer to critics who had accused him of embracing a racist position because of his membership in the Mormon church, which specifically excludes Negroes from its priesthood. (See also MICHIGAN.)


UPI

GEORGE ROMNEY, the first Republican to declare his intention to seek the presidential nomination in 1968, withdrew on Feb. 28, 1968, in a surprise announcement.

Presidential Ambitions. Despite the undeclared nature of his candidacy through most of the year, Romney acted like an active contender for the Republican presidential nomination. He conferred with national Republican leaders, approved establishment of a national Romney-for-President office in Washington, D. C., and traveled extensively to advance his views on national and international affairs.

Major attention centered on Romney's view of the Vietnam War. Early in the year he voiced vigorous support of the war. Later, however, Romney questioned the right of the United States to be in Vietnam at all. He explained his earlier views by making a highly controversial statement that U. S. officials in Vietnam had "brainwashed" him on a previous visit.

Despite his withdrawal, he was expected to play a major role in the 1968 presidential contest.

Background. Born in Mexico of parents who were U. S. citizens, Romney grew up in the United States. After serving as a Mormon missionary, he began a business career in 1930 as a lobbyist for the Aluminum Company of America. In 1939 he joined the Automobile Manufacturers Association in Detroit. Nine years later he moved to Nash-Kelvinator Corporation, and when that company merged with the Hudson Motor Car Company in 1954 he became president of the new American Motors Company. He was elected governor of Michigan in 1962 and won reelection in 1964 and 1966.

CHARLES THEISEN
The Detroit "News"

ROSTOW, Walt. See biographical sketch under FOREIGN POLICY.

ROWING. See SPORTS.

RUBBER

Strikes hampered production in the U. S. rubber industry in 1967. The United Rubber Workers struck the Big Five producers—B. F. Goodrich, Firestone, Uniroyal, General Tire, and Goodyear—at various times from April through July. Some 75,000 workers were idled at the peak of the strike. (See also LABOR.)

The nation's consumption of rubber in 1967 fell to 2,120,000 long tons, down 125,000 long tons from the 1966 record. Synthetic types accounted for 1,620,000 long tons—or 76.6%—of consumption, and natural rubber made up the other 495,000 tons. SBR (styrene-butadiene rubber) continued to dominate the synthetics as use rose to 1,090,000 long tons.

Per capita rubber consumption in the United States was 23.6 pounds per person in 1967, compared with 25.3 pounds in 1966.

U. S. Tire Production. Industry output of all types of tires in 1967 totaled 175,250,000 units, but shipments reached 188,300,000 units. A record 108,000,000 passenger-car tires went to retail outlets. However, shipments of original-equipment tires declined by 6,000,000 units to 41,000,000 units, reflecting cutbacks in auto output during 1967.

World Rubber Consumption. New rubber consumed worldwide totaled 5,805,000 long tons in 1967. This consisted of 3,290,000 long tons of synthetic rubber and 2,515,000 long tons of natural rubber. The United States was the leading consumer country, followed by Japan, Britain, and West Germany.

LEADING COUNTRIES IN RUBBER CONSUMPTION—1967[1]
(In long tons of 2,240 pounds)

Country	Natural rubber	Synthetic rubber
United States	492,000	1,628,000
Japan	246,000	261,000
Britain	172,000	191,000
West Germany	134,000	192,000
France	123,000	172,000
USSR	285,000	10,000
Italy	96,000	150,000
Canada	46,000	106,000
India	70,000	27,000
Czechoslovakia	44,000	46,000
Brazil	32,000	53,000
Australia	35,000	40,000
Sweden	21,000	37,000
Belgium-Luxembourg	21,000	30,000
Netherlands	22,000	24,000
Hungary	17,000	13,000
Austria	10,000	18,000
Malaysia	16,000	1,000
Denmark	7,000	5,000
Other countries	626,000	286,000
World total	2,515,000	3,290,000

[1] Estimated.

World Rubber Production. Synthetic rubber output amounted to 3,410,000 long tons in 1967. Five countries—United States, Japan, Britain, Canada, and France—accounted for 81% of the total. Natural rubber output totaled 2,450,000 long tons, of which 85% was produced by Malaysia, Indonesia, Thailand, and Ceylon.

New Products and Materials. Two more tire manufacturers introduced fiberglass-belted bias-ply tires in 1967. Developed in 1966, the new tire is a compromise between conventional and radial-ply tires.

Some automotive and tire experts believe that the belted bias tire may prove to be the "tire of the future."

W. R. MULLIGAN
Editor, "Rubber World"

RUMANIA

On December 7 the national conference of the Rumanian Communist party, meeting in Bucharest, chose party secretary-general Nicolae Ceaușescu as new chief of state, replacing Chivu Stoica. Ceaușescu will also retain his party office. This event crowned a year in which Ceaușescu emerged as Rumania's indisputable leader.

In his first three years as party secretary, Nicolae Ceaușescu achieved a peak of national communism uniquely suited to Rumania's self-interest. The nation remained cautiously neutral in the Sino-Soviet quarrel, reduced its military commitments, accelerated its industrialization to suit its own needs and not those of the Communist bloc, and was trading principally with non-Communist states. At the Communist party conference on December 7, party chief Ceaușescu revealed a reorganization plan designed to eliminate overlapping of party and government functions and to make Rumanian products competitive on the world market.

Seven events crowned Rumania's prestige-seeking activities. Premier Ion Gheorghe Maurer was Lyndon Johnson's guest at the White House on June 27—the first Communist head of government to be received there; Foreign Minister Corneliu Mănescu was elected president of the UN General Assembly on September 19—the first Communist in this post; Rumania's ambassador to the United States witnessed the launching of a Gemini spacecraft at Cape Kennedy—the first Communist diplomat so honored; a deputy premier visited Spain to open formal trade relations—the highest-ranking Communist figure to visit Spain since 1939; Rumania was the first Communist bloc nation to resume diplomatic relations with Albania; U. S. Ambassador-at-Large Averell Harriman visited Bucharest to solicit Rumania's intercession with North Vietnam; and Rumania was the only European Communist state to canvass for votes to admit Communist China to the UN.

Relations with Moscow. Trade between Rumania and the Soviet Union had declined seriously by 1967. Rumania is now at the bottom of Moscow's list of trading partners in the bloc. Visiting Moscow in April and June, Ceaușescu again hinted at his wish to regain the former Rumanian territory of Bessarabia from the Soviet Union. Among other irritants in Soviet-Rumanian relations were Rumania's exchange of diplomatic recognition with West Germany in January and the visit of German Foreign Minister Willy Brandt to Rumania. No other bloc nation except the USSR has exchanged envoys with Bonn, but Rumania did so despite denunciations by Moscow and East Berlin. A vast increase in trade between West Germany and Rumania (West Germany is Rumania's second largest trading partner) has almost revived the pre-World War II situation of Germany as Rumania's most important trading partner. Rumania at first rigidly refused to participate in a conference of Communist leaders in Czechoslovakia, and constantly maintained its policy of asserting its independence while giving Moscow minimum grounds for offense.

In July, Ceaușescu reaffirmed close cooperation with the USSR and all other Communist nations as the keystone of his foreign policy. In August, Rumanian units participated for the first time since 1964 in Warsaw Pact maneuvers.

Internal Reorganization. In May, Ceaușescu revealed that "some other party" (presumably the

RUMANIAN PREMIER Ion Gheorghe Maurer (*left*) confers with U. S. President Johnson with the aid of an interpreter on June 27. Maurer was the first Communist head of government to be a White House guest.

WIDE WORLD

Soviet Communist party) was attempting to penetrate the Rumanian Communist party and create an opposition faction to challenge and displace its leadership. He warned Rumanian party members of the risks of contacting foreign Communist parties over "the heads of the leadership," and insisted the Comintern and Cominform were outdated. A reorganization of the security police was conducted, placing it under party control, and former security officials were upbraided for their disregard of citizens' rights. Ceauşescu also plans to overhaul the economy, increase the dwindling birthrate by outlawing abortions and discouraging divorce, liberalize the educational system, and surpass President Tito of Yugoslavia as spokesman for the "Third World."

Rumania at the United Nations. Rumania pursued a relatively pro-Israel line by signing a $35 million trade pact with Israel (April 16) and diverged from Moscow's line by refusing to sign a declaration condemning Israel as an aggressor in the Israeli-Arab conflict. At the United Nations, Premier Maurer said the way to lasting peace was through negotiations and agreements based on mutual respect for the legitimate concerns of parties concerned. The election of Corneliu Mănescu to the presidency of the General Assembly was a sign that Rumania had successfully projected its new independent image on the world scene.

Economy. In 1967 the Rumanian government began seriously discussing economic reforms that would make the products of Rumanian industry more competitive on the world market and allow the nation to retain its growing economic independence from the Soviet Union. Only 31% of Rumania's trade was with the Soviet Union in 1967—a startling drop from the 70% figure of five years earlier. Most of the proposed economic reforms were aimed at decentralizing industry, freeing it from bureaucratic control, and gaining more profit from industry. The economic reforms were expected to go into effect in 1968. However, Rumania's economy remained healthy in 1967.

SHERMAN D. SPECTOR
Russell Sage College

RUMANIA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 91,699 square miles (237,500 sq km).
Population: 19,143,000 (July 1, 1966 est.).
Chief Cities (1965 est.): Bucharest, the capital, 1,246,878; Cluj, 167,930; Timişoara, 153,552; Braşov, 140,500.
Government: *Chief of State and Secretary-General of the Communist party*—Nicolae Ceauşescu (elected chief of state Dec. 7, 1967, and party secretary July 25, 1965); Premier—Ion Gheorghe Maurer (reelected Aug. 21, 1965). Parliament—Grand National Assembly, 465 members.
Religious Faiths: Rumanian Orthodox, 90% of population.
Education: *Literacy rate* (1956), 89% of population aged 15 and over. *Total school enrollment* (1964)—3,708,051 (primary, 2,991,612; secondary, 329,816; teacher-training, 12,498; technical, 250,841; higher, 123,284).
Finance (1966 est.): *Revenues*, $17,900,000,000; *expenditures*, $17,700,000,000; monetary unit, leu (6 lei equal U. S.$1).
Industrial Production Index (1966): 277 (1958=100).
Manufacturing (metric tons, 1966): Cement, 5,892,000; crude steel, 3,672,000; wheat flour, 2,460,000.
Crops (metric tons, 1966): Sunflower seed, 671,000 (ranks 3d among world producers); maize, 6,200,000; wheat, 5,000,000; sugar beets, 3,561,000; potatoes, 3,341,000.
Minerals (metric tons, 1966): Crude petroleum, 12,828,000; lignite, 7,140,000; coal, 6,312,000; iron ore, 2,676,000.
Foreign Trade (1966): *Exports*, $1,186,000,000 (chief exports, 1965: fuels, metals, minerals, $277,789,000; machinery and equipment, $203,818,000; inedible organic raw materials, $155,738,000; foodstuffs, $153,055,000); *imports*, $1,213,000,000 (chief imports, 1965: machinery and equipment, $420,065,000; fuels, metals, minerals, $348,177,000; inedible organic raw materials, $119,352,000). *Chief trading partners* (1965): USSR (took 39% of exports, supplied 38% of imports); West Germany (took 6% of exports, supplied 10% of imports).
Transportation: *National roads* (1964), 7,155 miles (11,515 km); *motor vehicles* (1965), 90,500 (automobiles, 27,000); *railways* (1965), 6,838 miles (11,004 km).
Communications (1967): *Telephones* (est.), 510,000; *television stations*, 9; *television sets*, 570,000; *radios* (1965), 2,790,000; *newspapers* (1965), 33.

RUSK, (David) Dean

U. S. Secretary of State: b. Cherokee County, Georgia, Feb. 9, 1909.

With steadfastness and dignity, Secretary Rusk in 1967 managed and defended the foreign policy of the United States in the face of growing resistance to that policy among groups inside the country. Although repeatedly subjected to personal abuse by antiwar groups, he continued to exert new efforts to defend his and the President's position.

Vietnam. Secretary Rusk repeatedly declined invitations to discuss Vietnam in open hearings of the Senate Foreign Relations Committee, on the ground that the topic was too delicate for public discussion there. But he did attempt to answer his critics in the nation at large by accepting opportunities to speak and be questioned. He argued that the U. S. effort in Vietnam was directed toward securing for the people of South Vietnam "the right and opportunity to determine their future in freedom without coercion or threat." He told members of the antiwar movement that if "the aggressors [entertain] the idea that they can get away with aggression with impunity, then there is going to be no peace." Toward the end of the year, Rusk endorsed Gen. William C. Westmoreland's judgement that the United States had begun to win in Vietnam.

China. The United States' poisoned relations with Communist China underwent no significant change in 1967, and Rusk's harshest critics charged him with inflexibility toward that country. In a press conference on October 12, Rusk described his view of the Chinese threat to the free nations of Asia. "Within the next decade or two," he said, "there will be a billion Chinese on the mainland, armed with nuclear weapons, with no certainty about what their attitude toward the rest of Asia will be." Sen. Eugene J. McCarthy of Minnesota and others immediately charged Rusk with invoking the spector of the "yellow peril," but Rusk denied the charge.

Soviet Union. Although the USSR supported the Vietcong with increased amounts of supplies during the year, Rusk and President Johnson searched for new avenues of approach to the Soviet leadership. Their searches yielded no new agreement but did appear to maintain and strengthen understanding.

Career. Rusk was graduated from Davidson College in North Carolina in 1931 and was a Rhodes Scholar at Oxford from 1931 to 1934. He taught government at Mills College in Oakland, Calif., from 1934 to 1940 and rose to the rank of colonel in the Army in World War II. He worked in the State Department from 1946 to 1952, when he became president of the Rockefeller Foundation. President-elect Kennedy named him secretary of state on Dec. 12, 1960.

(See also FOREIGN POLICY.)

WALTER DARNELL JACOBS
University of Maryland

RUSSIA. See UNION OF SOVIET SOCIALIST REPUBLICS.
RUSSIAN LITERATURE. See SOVIET LITERATURE.

RWANDA

Events in Rwanda during 1967 were dominated by external developments. Relations improved with neighboring Burundi and the Democratic Republic of the Congo, but conflicts over refugees continued.

RWANDA • Information Highlights

Area: 10,169 square miles (26,338 sq km).
African Population: 3,200,000 (Mid 1966 UN est.).
Chief City (1964 est.): Kigali, the capital, 7,000.
Government: *President*—Grégoire Kayibanda (took office for 2d term Oct. 3, 1965). *Parliament—National Assembly,* 99 members (all belonging to the Parmehutu party).
Religious Faiths: Roman Catholics, 26% of population; others, including tribal religions, 74%.
Education: *Total school enrollment* (1963)—367,246 (primary, 359,542; secondary, 2,268; teacher-training, 2,016; technical, 3,370; higher, 50).
Finance (1967 est.): *Revenues,* $13,600,000; *expenditures,* $15,000,000; *monetary unit,* franc (100 francs equal U. S.$1).
Gross National Product (1962): $114,000,000.
Crops (metric tons): Sweet potatoes and yams (1963–64), 421,000; cassava (1962–63), 290,000; coffee (1966–67), 9,000.
Minerals (metric tons, 1965: Tin concentrates (1966), 972; beryl, 686 (exported); lithium mineral (amblygonite), 295; tungsten ore, 178; columbium and tantalum, 23.
Foreign Trade (1965): *Exports,* $14,063,400 (chief exports: coffee, $7,353,600; tin ores and concentrates, $5,060,400; pyrethrum, $275,800; tea, $222,400); *imports,* $18,037,300 (chief imports: transport equipment, $1,342,400; motor vehicles, $1,311,100; textile yarn and fabrics, $1,280,300). *Chief trading partners:* Belgium-Luxembourg (took 38% of exports, supplied 26% of imports); U. S. (took 49% of exports, supplied 4% of imports); Uganda (took 1% of exports, supplied 17% of imports).
Transportation: *Roads* (1966), 3,534 miles (5,686 km); *motor vehicles* (1963), 4,698 (automobiles, 2,841); *principal airports,* Butare, Kamembe, Kigali.
Communications: *Telephones* (1966 est.): 850.

Refugees. The tangle of charges concerning refugee problems and border violations between Rwanda and Burundi was somewhat relieved by normalization of relations on March 4. Tensions were eased further by a meeting of Rwanda's President Grégoire Kayibanda and the presidents of Burundi and the Congo in Goma, the Congo, March 17–20. Plans for economic cooperation were discussed, and Burundi promised that Tutsi refugees from Rwanda would lay down their arms.

The presence of Hutu refugees from Burundi strained Rwanda's chronically weak economy. This long-term problem was complicated by the influx of Congolese refugees from Bukavu following the revolt of Katangese soldiers and white mercenaries in June 1967.

While agreeing to accept civilian refugees from the Congo for short "visits," Rwanda barred any border entry to mercenaries and Katangese. The Organization of African Unity and others sought a solution for the evacuation of the mercenaries, and Rwanda finally agreed that disarmed mercenaries and soldiers could be given safe conduct to Kigali for evacuation elsewhere. Early in November reports from the Congo stated that the mercenaries and soldiers had fled Bukavu for Rwanda.

Economy. Rwanda's economic recovery program proved disappointing. Nonetheless, aid from the International Monetary Fund, the European Economic Community, and Belgium was forthcoming in 1967.

EDOUARD BUSTIN
Boston University

SAFETY. See Industrial Health and Safety; National Highway Safety Bureau.
SAILING. See Sports—*Yachting*.

ST. LOUIS

In 1967, St. Louis residents voted in municipal elections and continued their efforts to combat urban decay and air pollution. In October the city's baseball fans celebrated the St. Louis Cardinal's second World Series victory in four years.

Municipal Elections. In the biennial municipal elections held in St. Louis (July 1, 1965 est. pop.: city, 699,000; metropolitan area, 2,239,000) in April, Donald Gunn, a Democrat, won easy reelection to a third term as president of the St. Louis board of aldermen.

City voters also elected 14 aldermen to fill seats in half of the city's aldermanic districts. The Democrats, who won 11 of the 14 district races, emerged with a margin of 24 to 4 in the city's legislative body. Republicans registered a net gain of three seats.

Urban Redevelopment and Air Pollution. St. Louis continued its struggle against urban decay and polluted air, two of its most pressing problems. The West End urban renewal project was further expanded during the year. St. Louis was one of the 67 U. S. cities chosen to receive an award in the federal government's model city program.

When the Missouri state legislature failed to approve a joint Missouri-Illinois air pollution control compact in its 1967 session, St. Louis enacted its own pollution ordinance. The measure tightened control over emissions from coal-burning operations and lowered the sulfur content of coal burned in the city.

Sports. The Cardinals, St. Louis' professional baseball team, won both the National League pennant and the World Series in the 1967 season. St. Louis took the world championship by defeating the Boston Red Sox, the American League champions, in four out of seven games.

Two new professional sports were inaugurated in St. Louis in 1967. A professional soccer team, the St. Louis Stars, played its first season at Busch Memorial Stadium. The St. Louis Blues, the city's new National Hockey League team, began its first season in November.

Deaths of Prominent Citizens. Three ranking St. Louis civic leaders died during the year: Joseph Cardinal Ritter, Archbishop of St. Louis since 1954 and a liberal spokesman for his church; Richard Amberg, the publisher of the St. Louis *Globe-Democrat* and an active participant in the civic political affairs of the city; and Jacob Lashly, a prominent city attorney who served as a member of the Administrative Tribunal of the United Nations in 1953–58 and president of the American Bar Association in 1940.

Public School Administration. In 1967 the Missouri General Assembly changed the organization of the St. Louis public school system. Administrative responsibility, which was previously shared by four men, was given to a single authority. William Kottmeyer, who was the superintendent of instruction under the old arrangement, became superintendent of the school system when the change went into effect on October 12.

BETHELEHEM STEEL CORPORATION

NEW BRIDGE connects St. Louis with East St. Louis in Illinois. The span crosses the Mississippi River near the Gateway Arch and Mall (*right*) on the Missouri side.

New Bridge. A new eight-lane, toll-free bridge across the Mississippi River in downtown St. Louis was opened on November 9 after months of delay. The bridge, which carries Interstate Highways 55 and 70, connects the city with East St. Louis on the Illinois side of the river. The 2,175-foot (665-meter) span over the Mississippi, financed jointly by Missouri, Illinois, and the federal government, cost $31 million.

Richard E. Dawson
Washington University

SALVATION ARMY

In 1967 the Salvation Army maintained operations in 70 countries and geographic areas and preached in 146 languages. There were 25,304 commissioned officers, 1,562 cadets, 31,931 full-time employees, and about 1 million soldiers, or lay members. Gen Frederick Coutts, the international leader of the organization, directed operations from his headquarters in London, England.

The Salvation Army's worldwide services in 1966 included 152 hospitals, dispensaries, and clinics, which treated 143,670 inpatients and 769,057 outpatients; 830 schools with 122,845 pupils; and employment agencies that placed 186,505 applicants in jobs.

The Salvation Army also operated 154 children's homes, 99 maternity homes for unwed mothers, 521 hostels for homeless persons and transient workers, 142 slum posts and settlement houses assisting families, 226 residences for elderly persons, and 11 institutes for the blind.

Commissioner Samuel Hepburn has been commander of the Salvation Army in the United States since January 1966. In the United States the organization is divided into four administrative territories. In 1967 there were 8,913 centers of operation, administered by 5,168 officers and employing 15,484 persons, and including 6,552 service extension units.

The Salvation Army's social institutions included

123 treatment centers aiding 71,059 homeless men; 54 camps serving 57,210 children and adults; and 15 Evangeline residences providing homes for businesswomen. The 306 boys' and girls' clubs and community recreation centers had a total attendance of 8,618,007. The Salvation Army also furnished care for unwed mothers in 35 resident centers, treated 41,362 patients in its general hospitals or related institutions, and gave outpatient care to 48,329 persons.

Other services include missing persons bureaus, employment bureaus, emergency disaster services, day nurseries and settlements, care and treatment of alcoholics, senior citizens programs, and aid to immigrants.

John Grace
The Salvation Army

SAMOA. See Pacific Islands; Western Samoa.

SAN FRANCISCO

Events in San Francisco in 1967 were highlighted by the election of a new mayor, voter rejection of a proposal for an immediate cease-fire and withdrawal of U. S. troops from Vietnam, and the much publicized influx of "hippies" into the Haight-Ashbury section of the city.

Elections. In the mayoralty race, Joseph L. Alioto, a lawyer and businessman, was elected on November 7 to succeed John F. Shelley, who had declined to seek a second term. Alioto polled 44% of the vote. His nearest rivals were Harold S. Dobbs, a lawyer, and Jack Morrison, a member of the city-county board of supervisors. The ballot, the longest in the city's history, listed 18 candidates for mayor, 44 candidates for six vacancies on the board of supervisors, and 16 city propositions. In addition, a sheriff and a district attorney were elected and two members of the board of education, appointed by the mayor, were confirmed by the voters.

THE HAIGHT-ASHBURY district of San Francisco was a favorite gathering place of the hippies in 1967. Their presence caused resentment among other residents of the area.

EUGENE ANTHONY FROM BLACK STAR

600→
ASHBURY
HAIGHT
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Interest centered on two of the many city propositions. The policy statement on the ballot that attracted national attention by recommending "an immediate cease-fire and withdrawal of United States troops from Vietnam" was defeated by a vote of 137,933 to 79,092. The other proposition, authorizing a $98 million bond issue to expand the San Francisco International Airport, received the two-thirds majority necessary to pass.

Construction. New construction in San Francisco followed a trend that has become increasingly evident in recent years. While the amount and value of nonresidential building continued to rise, the city lost ground to the suburbs in home construction. Major commercial buildings under way included the 52-story world headquarters of the Bank of America, the 32-story Mutual Benefit Life Insurance and 38-story Crocker buildings, and the three-block-long Japanese Trade Center.

Transportation. In spite of growing financial difficulties, the building of the Bay Area Rapid Transit System (BART) continued throughout the year. The system will link San Francisco with the eastbay communities by means of high-speed trains operating over 75 miles of elevated, surface, and underground tracks (including a tunnel beneath the bay). Means were being sought to raise the funds, estimated at $150 million, which are needed to complete the project. The digging of a two-level subway beneath Market Street for BART trains and cars of the Municipal Railroad seriously hampered the flow of traffic on the city's busiest thoroughfare. The entire BART system is scheduled for completion in 1971.

The Hippies. During the year, several thousand young people known as "hippies" assembled in the Haight-Ashbury district in the western part of the city and attracted wide attention by their well-publicized revolt against orthodox patterns of dress and behavior. Overcrowded conditions in this rundown section of the city presented occasional problems to the police and health authorities.

Newspaper Strike. In January 1968, a strike by members of the Mailers Union shut down the city's two daily newspapers, the *Chronicle* and the *Examiner*.

Finances. The budget of $500,282,171 for the 1967–68 fiscal year was the highest in the city's history and represented an increase of $96 million over 1966–67. The city tax rate stood at $8.80. A newly enacted state law requiring that all property be assessed at 25% of its cash value placed a severe burden on the city's homeowners, many of whom had their taxes more than doubled.

Unemployment. In October 1967, unemployment in the Bay Area stood at 4.2%, a decline of 0.2% from October 1966.

Oscar Lewis
Author, "San Francisco: Mission to Metropolis"

SANDBURG, Carl (August)

U. S. poet, biographer, and folklorist: b. Galesburg, Ill., Jan. 6, 1878; d. Flat Rock, N. C., July 22, 1967.

Carl Sandburg was a poet and chronicler of the American people. He fashioned the speech, history, and folkways of the Midwest—what he called "folksay"—into a sparse, lean, rhythmic, free verse mixture of harsh beauty and delicate sensibility. In a fine prose also woven from folksay, he wrote a 6-volume, Pulitzer Prize-winning biography of America's archetypal democratic hero, Abraham Lincoln. And in his own life, Sandburg came close to living out the faith at the core of his works: the equality of all and the beauty of the life of the common man.

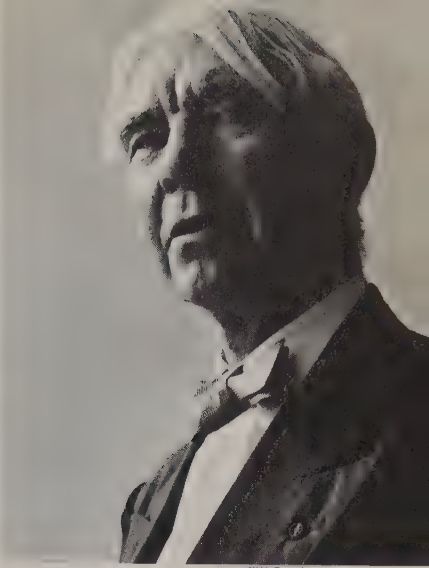
Sandburg personified egalitarian America. Out of his deep involvement with the common man, his abiding love for his fellowmen, his passionate commitment to the ideals of his nation, and his optimism about its future, he fashioned one man's testament to his world. He lacked the grace of polished form and the subtlety of complex ideas, and he faced evil with a naïve disbelief in its ultimate reality; yet he gave voice to a true democracy.

Early Life. Carl Sandburg was born to Swedish immigrant parents in Galesburg, Ill., on Jan. 6, 1878. He went to work at the age of 13, and took a variety of odd jobs ranging from driving a milk truck to working as a harvest hand in Kansas. He served for eight months in Puerto Rico during the Spanish-American War and later worked his way through four years at Lombard College in Galesburg, but left in 1902 without taking a degree.

Sandburg went to work as a journalist in Milwaukee in 1907. He was very active in the Social Democratic party of Wisconsin at this time, and at party headquarters he met his future wife, Lillian Paula Steichen, whom he married in 1908. Mrs. Sandburg was the sister of the noted photographer Edward Steichen, whose biography Sandburg wrote in 1929. From 1910 to 1912, Sandburg served as secretary to Emil Seidel, the Socialist mayor of Milwaukee. He moved to Chicago in 1913, where he worked for 15 years as a liberal journalist, most notably as an editorial writer for the *Daily News*.

Poet. It was during his years with the *Daily News* that Sandburg became established as a poet and one of the leaders, along with Edgar Lee Masters and Vachel Lindsay, of the Chicago poetic revival of the time. Though Sandburg's first volume of poems, *In Reckless Ecstasy*, had been published privately in 1904, and though some his work began appearing in Harriet Monroe's *Poetry* magazine in 1914, it was not until the publication of *Chicago Poems* in 1916 that he was acknowledged as a major new poetic voice. *Chicago Poems* typifies much of Sandburg's later work. In such varied poems as *Chicago, Fog, Grass,* and *Nocturne in a Deserted Brickyard,* he was alternately raucous, imagist, brooding, and satiric. He spoke the idiom of the people, both of city slang and prairie yarn.

Chicago Poems was followed by other very popular collections in the same vein: *Cornhuskers* (1918); *Smoke and Steel* (1920); and *Slabs of the Sunburnt West* (1922).



Carl Sandburg

(1878–1967)

WIDE WORLD

The People, Yes—A Selection

The following lines are excerpted from *The People, Yes,* by Carl Sandburg, copyright, 1936, by Harcourt, Brace & World, Inc.; copyright, 1964, by Carl Sandburg. Reprinted by permission of the publisher.

"Who and what is man? He is Atlas and Thor and Yankee Doodle, an eagle, a lion, a rooster, a bear that walks like a man,
an elephant, a moon-face, David and Goliath, Paul Bunyan and the Flying Dutchman, Shakespeare, Lincoln and Christ, the Equator and the Arctic Poles, holding in one hand the Bank of England and the Roman Catholic Church, in the other the Red Army and the Standard Oil Company, holding in easy reach the dogs of war and the doves of peace, the tigers of wrath and the horses of instruction . . . ."

. . .

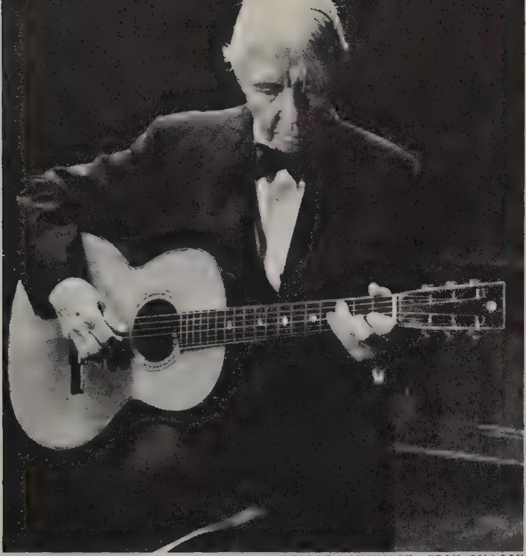
Hope is a tattered flag and a dream out of time.
Hope is a heartspun word, the rainbow, the shadblow in white,
The evening star inviolable over the coal mines,
The shimmer of northern lights across a bitter winter night,
The blue hills beyond the smoke of the steel works,
The birds who go on singing to their mates in peace, war, peace,
The ten-cent crocus bulb blooming in a used-car salesroom,
The horseshoe over the door, the luckpiece in the pocket,
The kiss and the comforting laugh and resolve—
Hope is an echo, hope ties itself yonder, yonder.

. . .

This old anvil laughs at many broken hammers.
  There are men who can't be bought.
  The fireborn are at home in fire.
  The stars make no noise.
  You can't hinder the wind from blowing.
  Time is a great teacher.
  Who can live without hope?

In the darkness with a great bundle of grief
  the people march.
In the night, and overhead a shovel of stars for
  keeps, the people march:
    "Where to? what next?"

In 1928, Sandburg moved from Chicago to Harbert, Mich., and that year published *Good Morning, America,* a collection of poetry more critical of America than earlier volumes had been. However,


GEORGE HONEYCUTT, FROM GILLOON

LONNIE WILSON, FROM GILLOON

FOLKLORIST, as well as poet and historian, Sandburg accompanied his folk songs on the guitar. The Sandburgs had been married 54 years when photographed in 1962.

Sandburg renewed his testament of faith in his country in 1936 with perhaps his most famous poem, *The People, Yes.* A colorful mixture of humor, folklore, and anecdote, it constitutes a major poetic effort to embrace America's endless variety.

Among Sandburg's last volumes were the *Complete Poems* (1950), which received the Pulitzer Prize for poetry in 1951, and *Harvest Poems, 1910–1960* (1960). His final collection, *Honey and Salt* (1963), showed a still vigorous Sandburg writing the same husky-throated, witty, and sensitive celebrations of man, nature, and love with which he had begun his career.

Biographer. Through some 20 years of his life, from the 1920's, Sandburg was involved in a sweeping study that resulted in his monumental work on Lincoln: *Abraham Lincoln: The Prairie Years* (2 vols., 1926) and *Abraham Lincoln: The War Years* (4 vols., 1939), which received the Pulitzer Prize for history in 1940. It has been universally praised: as distinguished biography, magnificent literature, sound and thorough history, and a passionate assertion of faith in the democratic ideal.

Children's Writer. Sandburg also wrote whimsical "American" folk-fairy tales that assured him a permanent niche among writers for children, *Rootabaga Stories* (1922), *Rootabaga Pigeons* (1923), *Rootabaga Country* (1929), and *Potato Face* (1930).

THE FREEDOM MEDAL is awarded to Sandburg by President Johnson at a White House ceremony on Sept. 11, 1964.

WIDE WORLD

SEAL OF THE PRESIDENT OF THE UNITED STATES

Folklorist. In addition to singing folk songs to audiences all over the country to his own guitar accompaniment, Sandburg published *The American Songbag* (1927), and *The New American Songbag* (1950).

Later Years. In 1945, Sandburg moved to a farm near Flat Rock, N. C. There he produced his last poems, his one novel, and a volume of autobiography. The novel, *Remembrance Rock* (1948), tells, in fictional style, the history of America from Plymouth Rock to Okinawa in World War II, and is a strong statement of Sandburg's beliefs about the nature of American democracy. The autobiography, *Always the Young Strangers* (1953), is a beautifully lyric evocation of the poet's youth.

Sandburg died at Flat Rock on July 22, 1967, at the age of 89. His funeral was conducted in accordance with his poem *Finish.*[1]

Death comes once, let it be easy.
Ring one bell for me once, let it go at that.
Or ring no bell at all, better yet.

Sing one song if I die
Sing John Brown's Body or Shout All Over God's Heaven.
Or sing nothing at all, better yet.

Death comes once, let it be easy.

The two songs mentioned in the poem, a Union Army marching song and a Negro spiritual, were played, and the church bell tolled once at the end of the service. The service took place in a church once attended by the treasurer of the Confederacy, C. G. Memminger (who had also owned the home in which Sandburg spent his last years). It was a fitting end to a life devoted to the binding up of wounds and the eradication of distinctions of race, clan, and caste.

C. Hugh Holman
University of North Carolina

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[1] From *Smoke and Steel* by Carl Sandburg, copyright, 1920, by Harcourt, Brace & World, Inc.; copyright, 1948, by Carl Sandburg. Reprinted by permission of the publisher.

SASKATCHEWAN

During 1967, in celebration of Canada's 100th birthday, Saskatchewan presented a full program of centennial events. The province participated in the Western Provinces Pavilion at Expo 67. Dominion Day celebrations were held in almost every city, town, and village, and there were dedications of such enduring projects as new parks, town halls, and museums. Centennial caravans depicting life in Canada, past and present, toured throughout the province by train and truck. Index 67, a mineral symposium and industrial exposition held at Regina provided a showcase for the industrial sector of the economy.

Completion of Gardiner Dam. The celebrations in the province were crowned by the official dedication ceremonies at Gardiner Dam. This structure, Canada's largest rolled earth dam, measures 16,700 feet in length, took nine years to build, and cost $120 million. Its completion marks the beginning of a new era for Saskatchewan's water-short central region.

The lake behind Gardiner Dam was named Lake Diefenbaker in honor of John G. Diefenbaker, who was prime minister at the start of the project. A large park on the banks of the lake was named for T. C. Douglas, former premier of Saskatchewan.

Water began flowing over the dam's spillway in July, bringing the level of the lake within reach of the pumps which supply the Saskatoon Southeast Water Supply System. This chain of canals, reservoirs, and pipelines serves irrigation, domestic, and industrial water needs over a large area of central Saskatchewan. By fall most of its reservoirs were filled and ready to operate.

Economy. Amid some concern over inflation and a slowdown in housing starts, Saskatchewan continued to participate in Canada's upward economic climb during 1967. An extremely dry summer at first appeared to have ruined chances for a good wheat crop, but when the harvesting combines swept into the fields they produced a harvest of good quality and of greater quantity than expected. Heavy fall rains recharged depleted reserves of soil moisture, producing good prospects for 1968.

Livestock production is increasingly important in Saskatchewan's economy. Growing markets and good prices are making this production an increasingly strong stabilizing force.

Potash production in Saskatchewan continued to advance as more new plants come into production and existing facilities are enlarged. There are now 10 mine and mill projects under way, three of which are in production.

The Prince Albert Pulp Mill Co. Ltd., well along with construction of its $65 million pulp plant, was expected to be in production by mid-1968.

While Saskatoon's centennial auditorium neared completion, Regina's continued to encounter difficulty until the provincial government undertook the responsibility of resuming construction.

Hospital Expansion. A new, provincially supported hospital for the Regina area was announced during the year. Plans called for a division of specialties between the new institution and existing hospital facilities, which are greatly overloaded at present.

Election. A provincial election was held on October 11. While the Liberals gained slightly in seats, their position relative to the opposition, the Cooperative Commonwealth Federation, remained virtually unchanged in terms of the popular vote. The heavy loser was the Progressive Conservative party, which was eliminated from the Legislature and lost a substantial portion of its popular vote to the two major parties. The results in seven constituencies were close enough to warrant judicial recounts and the determination of final results was delayed.

GARTH BLUE
Librarian, Prairie Farm Rehabilitation Administration, Canada Department of Agriculture

SASKATCHEWAN • Information Highlights

Area: 251,700 square miles (651,904 sq km).
Population: 955,344 (1966 census).
Chief Cities (1966 census): Regina, the capital, 131,127; Saskatoon, 115,892; Moose Jaw, 33,417; Prince Albert, 26,269; Swift Current, 14,485; Yorkton, 12,645.
Government: *Chief Officers*—lt. gov., Robert L. Hanbidge; premier and prov. treas., W. Ross Thatcher (Liberal Party); atty. gen. and prov. secy., D. V. Heald (L); min. of educ., G. J. Trapp (L); chief justice, E. M. Culliton. *Legislature*—Legislative Assembly (convened mid-February 1968); 59 members (35 Liberals; 24 Cooperative Commonwealth Federation members.)
Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 233,213 pupils (9,996 teachers); private schools, 4,316 pupils (267 teachers); Indian (federal) schools, 5,475 pupils (221 teachers); college and university (fall 1966), 11,577 students. *Public school expenditures* (1963)—$85,796,000 ($422 per pupil); average teacher's salary (1964–65 est.) $5,624.
Public Finance (fiscal year 1967 est.): *Revenues*, $291,800,000 (chiefly, sales tax, $86,130,000; income tax, $53,060,000; federal funds, $38,222,000). *Expenditures*, $289,170,000 (chiefly, education, $73,530,000; health and social welfare, $100,260,000; transport and communications, $59,590,000).
Personal Income (1966 est.): $2,135,000,000; average annual income per person, $2,238.
Public Assistance (fiscal year 1967 est.): $17,080,000 (aged and blind, $2,480,000; dependents and unemployed, $8,160,000).
Labor Force (industrial employees only, 1966 est.): 122,500.
Manufacturing (1964): Value added by manufacture, $128,354,000 (printing, publishing, and allied industries, $11,276,000; wood industries, $6,410,000; nonmetallic mineral products, $9,513,000; nonelectrical machinery, $2,706,000; fabricated metals, $7,949,000; food and beverages, $55,294,000).
Agriculture (1966 est.): *Cash farm income*, $946,532,000 (livestock, $218,722,000; crops, $723,261,000; govt. payments, $4,136,000). *Chief crops* (cash receipts)—wheat, $505,717,000 (ranks 1st among the provinces); barley, $23,583,000 (ranks 2d); rapeseed, $20,586,000 (ranks 1st); flaxseed, $16,431,000 (ranks 2d); oats, $9,717,000 (ranks 2d); rye, $8,323,000 (ranks 1st).
Mining (1966 est.): *Production value*, $366,452,802. *Chief minerals* (short tons)—potash, 2,045,000 (ranks 1st among the provinces by value); copper, 19,417 (ranks 5th); uranium, 900 (ranks 2d); sodium sulfate, 301,940 (ranks 1st); zinc, 28,973; sand and gravel, 9,084,891; crude petroleum, 93,786,000 barrels (ranks 2d).
Transportation: *Roads* (1965), 128,457 miles (206,687 km); *motor vehicles* (1965), 418,606; *railroads* (1966) 8,567 track miles (13,784 km); *licensed airports* (1966) 29.
Communications: *Telephones* (1965) 303,810; *television stations* (1967) 6; *radio stations* (1966) 11; *newspapers* (1966), 4 (daily circulation, 122,139).

SATO, Eisaku. See biographical sketch under JAPAN.

SAUDI ARABIA

During 1967, Saudi Arabia relaxed its rivalry with the United Arab Republic (UAR) for leadership of the Arab world, and adopted a policy of collaboration against Israel, which is considered to be their common enemy.

Israeli-Arab War. The 6-day Israeli-Arab war in June was the most important event of the year for Saudi Arabia. Recovery from the Arab defeat became the chief preoccupation of the government, although the war was so brief that the country's armed forces had scant opportunity to join in. The island of Tiran at the mouth of the Gulf of Aqaba is Saudi Arabian, but the guns used to blockade the gulf were Egyptian and were mounted by agreement between the two governments.

Popular feeling in Saudi Arabia ran high against Israel's occupation of large segments of Arab territory. Resentment over real or alleged support of Israel by the U. S. government and by most Americans resulted in anti-American outbursts. Saudi Arabia joined other Arab oil-producing states in stopping shipments of oil to the United States, Britain, and West Germany. The boycott was ended at the 13-nation meeting held in Khartoum, Sudan, from August 29 to September 1. Saudi Arabia did not join other Arab states in breaking diplomatic relations with the United States during the war, and tension between the two countries soon lessened.

Saudi Arabia agreed at Khartoum that three oil-producing Arab states not materially damaged by the war should provide economic aid for those that had suffered severe losses. Accordingly, it undertook to pay $140 million a year to the UAR and Jordan as its share.

Yemen and South Arabia. At the Khartoum meeting, Saudi Arabia and the UAR also agreed on a settlement of the Yemen civil war along the lines of the Jidda agreement of August 1965. The UAR withdrew its military forces from Yemen by December 1967, and Saudi Arabia ceased shipping arms to the Yemeni royalists. The overthrow of President Abdallah al-Sallal of Yemen on November 5 brought to power a regime more inclined to friendship with Saudi Arabia. Later, however, Saudi Arabia, was again charged with aiding the royalists in response to increased Soviet assistance for the republicans.

The British evacuation of Aden and other federated states of South Arabia in late November paved the way for the establishment of an Arab socialist government in the area now called the Republic of South Yemen. The new regime is not as deeply committed to the UAR as Saudi Arabia had once feared it might be.

Relations with Other Islamic States. The Islamic summit conference expected to be held in 1967 was postponed without a future date being set. The Arabs' desire for support against Israel provided Saudi Arabia with a strong argument in favor of such a conference. The diplomatic support given the Arabs during the Middle East crisis by Islamic states such as Iran and Turkey, formerly on unfriendly terms with the Arabs, indicated that the conference might benefit the Arab cause.

Economy. The drop in anticipated oil revenues, the need for money for defense, and the Khartoum commitment caused Saudi Arabia's budget for the fiscal year beginning in October 1967 to balance at $1.09 billion, or about 1% less than the previous year's budget. This is the first time in years that the budget has shrunk rather than expanded. King Faisal announced that it had been necessary to curb expenditures unrelated to development projects or public service, and that cuts were made mainly in administrative expenditures and expenditures not vital to the public welfare. The sum committed at Khartoum was to be acquired from local loans and savings in the general state budget.

In early 1967 the production of the Arabian American Oil Company at times exceeded 3 million barrels a day. The capacity of the company's largest field, Ghawar, was expanded to over 1 million barrels a day, and the capacity of the Safaniya field, the largest offshore field in the world, was raised to 875,000 barrels a day. The allied field of Khafji, operated by the Japanese-owned Arabian Oil Company in the waters of the neutral zone between Saudi Arabia and Kuwait, produced about 250,000 barrels a day. A much smaller offshore field, Abu Sa'fa, which began full production in 1967, divided its revenue equally between the Saudi Arabian and Bahrain governments. The French firm Auxirap began drilling in its new offshore concession areas along the Red Sea coast of Saudi Arabia.

Saudi Arabia began an $18 million desalting project five miles outside Jidda in February.

Line of Succession. In October King Faisal's half brother and minister of the interior, Prince Fahd, was appointed second vice president of the council of ministers, which indicated that he is next in the line of succession to the throne after Crown Prince Khalid, the first vice president of the council.

GEORGE RENTZ
Hoover Institution, Stanford University

SAVINGS. See BANKING.

SCHOFIELD, Paul. See biographical sketch under MOTION PICTURES.

SCHOOLS. See COLLEGES AND UNIVERSITIES; EDUCATION; and the *Information Highlights* tables of articles on countries and states.

SCIENCE. See articles on the various sciences: ASTRONOMY, CHEMISTRY, PHYSICS, etc.

SECURITIES AND EXCHANGE COMMISSION. See STOCKS AND BONDS.

SEISMOLOGY. See EARTHQUAKES.

SAUDI ARABIA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 870,000 square miles (2,253,300 sq km).
Population: 6,870,000 (1966 midyear UN est.).
Chief Cities (1965 est.): Riyadh, the capital, 225,000; Jidda, 194,000; 194,000; Mecca, 185,000.
Government: *King*—Faisal ibn Abd al-Aziz (acceded 1964).
Religious Faiths: Muslims, 99% of population.
Education: *Total school enrollment* (1963–64)—250,682 (primary, 1964, 218,990; secondary, 1964, 18,082; teacher training, 1963, 7,842; technical, 1963, 4,200; higher, 1964, 1,568).
Finance (1966 est.): *Revenues*, $1,165,800,000; *expenditures*, $1,165,800,000; monetary unit, riyal (4.50 riyals equal U. S.$1).
Gross National Product (1965 est.): $1,521,000,000.
Petroleum Production Index (1966): 237 (1958—100).
Manufacturing (metric tons, 1965): Residual fuel oil, 9,638,000; gasoline, 2,038,000.
Crops (metric tons, 1966–67 crop year): Dates, 375,300.
Minerals (metric tons, 1965): Crude petroleum (1966), 118,752,000 (ranks 4th among world producers).
Foreign Trade (1965–66): *Exports*, $1,317,000,000 (chief exports, 1965: crude petroleum, $1,111,566,600; petroleum products, $210,953,400); *imports*, $468,900,000 (chief imports, 1965: motor vehicles, $54,799,500; nonelectrical machinery, $27,866,400). *Chief trading partners* (1965): U. S. (took 7% of exports, supplied 21% of imports); Japan (took 18% of exports, supplied 8% of imports).
Transportation: *Roads* (1964), 8,152 miles (13,119 km); *motor vehicles* (1965), 92,855; *railways* (1965), 356 miles (573 km); *merchant vessels* (1966), 10 (30,000 gross registered tons); *government airline*, Saudi Arabian Air Lines; *principal airports*, Jidda, Riyadh.
Communications: *Telephones* (1966): 28,000; *radios* (1964), 1,000,000; *newspapers* (1965), 4.

PROTEST against the policies of Selective Service and, more directly, against the American position in Vietnam, produced a flurry of real and symbolic draft card burnings throughout the country in 1967. This young man, a former University of Wisconsin student, is participating in a protest at Madison, Wis.

UPI

SELECTIVE SERVICE

June 30, 1967, was the deadline for the quadrennial renewal of the Universal Military Training and Service Act of 1951. Criticism and hearings during the previous year had clearly indicated that the 1967 renewal would not be as routine a matter as earlier renewals.

Monthly draft calls were markedly lower in 1967, averaging 18,000 a month, compared with 30,390 in 1966. Draft calls totaled 218,700 in 1967; in 1966 the total was 364,680. But these lower quotas failed to abate the rising controversy surrounding the Selective Service System that early in the year reached the highest point in its long history.

In February the National Advisory Commission ón Selective Service, appointed in 1966 by the President, recommended sweeping changes in the system, some of which President Johnson endorsed in a special message to Congress in March. Also in February a special panel appointed by the House Armed Services Committee made its more conservative recommendations. After more hearings the law was renewed with some changes and with a new title, the Military Selective Service Act of 1967.

Though it operated under a 1951 statute, Selective Service has been, in fact, little changed from the organization established in 1940 or even from its World War I predecessor. From 1940 to 1967 it functioned with only a slight interruption and little serious criticism. This record of success rests upon the prestige and leadership of its director, Gen. Lewis B. Hershey, which until recently have been virtually unchallenged; upon the close identification of organizational features like local boards with the American way of life and general acceptance of their decisions as fair and equitable; and upon the fact that in peacetime the system tends to draft the relatively less educated, skilled, and articulate individuals whose induction results in little disruption of the civil society and economy.

Criticism of the System. There have been debates (primarily in 1940 and 1948) over whether or not conscription should be carried out, but never before has debate concentrated so intensely on *how* conscription should be conducted. The institution of Selective Service is now under attack, not the policy of conscription. Public opinion polls since World War II have shown continued support for conscription but declining confidence in Selective Service as the means of conscription.

The main target for recent criticism has been the local boards. Ironically, the local boards have been the principal means of winning acceptance for the system and its task in the past. Now, however, it has been charged that the boards lack uniformity, that the real decisions are made by board clerks, that board members are too old, that they are not "little groups of neighbors" but anonymous and removed from the increasingly mobile registrants, and that they are "draft-happy" veterans.

Two other criticisms that are related (and also contradictory, according to system defenders) are that the draft falls heaviest on lower-class individuals, particularly Negroes, and that too many men have been rejected as unfit for insufficient reasons.

Though General Hershey's image had heretofore deflected criticism, as the year ended he drew fire for suggesting that local boards consider revoking deferments of war and draft protesters. Critics claimed his suggestion had the effect of law in the system and would turn it into a device for suppressing free speech. To what extent this criticism was widely shared in indeterminate.

Factors Heightening the Criticism. In 1966 and 1967 several factors converged to focus criticism of the system. Foremost among these was the divisive nature of the war in Vietnam, which to some Americans meant that no one should be deferred, and to others that no one should be inducted.

Second, the tightening of deferment policies that had grown increasingly liberal since the Korean War created bitterness among those denied deferments that earlier might have been granted readily. The continued civilian status of a few famous personalities deferred under previous liberal policies served to highlight the inequity of the situation. The large number of unfit or IV-F deferments, including those of some professional athletes, heightened resentment at tightening, as did efforts of the system to tap the large pool of deferred students who were both articulate in protesting and largely unenthusiastic about the Vietnam War.

Fluctuating liberality of deferments stems from the growth of the manpower pool, a problem that will continue to complicate Selective Service's future operations regardless of the outcome of the war in Vietnam. An ever-smaller proportion of the manpower pool is required to meet the needs of the armed forces. Of the nearly 2 million men now reaching draft age annually, only one half to one third are likely to be needed by the armed forces, and of these only 10 to 40 percent are likely to be taken by induction. The end effect is to sharpen the question of equity.

Third, Selective Service's policy of permitting registrants to join the National Guard and reserve units when induction was imminent was criticized because these forces were not mobilized, thus making them appear a haven for draft dodgers.

A fourth factor bringing the system under attack appears to have been its vulnerability to criticism that it worked to the disadvantage of the poorer classes and racial minorities while favoring the college educated. In the midst of mounting racial tension and Negro militancy, it was difficult for system spokesmen to explain convincingly that the disproportionate percentages of Negroes serving in Vietnam and their high casualties were largely a result of high enlistment and reenlistment by Negroes and of armed forces policies on manpower utilization. It was even more difficult to explain why local boards in the South had few if any Negro members.

Draft card burners received wide publicity and provoked Congress to enact stiffer penalties for such acts. However, these acts were seldom considered as protests aimed specifically at the Selective Service System but rather as part of the more general protest against U. S. involvement in Vietnam. The draft card and the penalties for its destruction merely provided a convenient symbol for general protest of the war. Of far greater relevance for the operation of Selective Service was the wide variety of proposed alternatives to its operation, the criticisms mentioned above, and the challenges to its legitimacy as a fair and equitable system.

Proposed Changes. The proposed alternatives to the present system generally fall into three major categories: universal military training (urged by former President Eisenhower); universal national service (suggested by Secretary of Defense Robert McNamara and urged by Secretary of Labor Willard Wirtz); and a professional or all-volunteer military. Each of these received wide consideration and support but were rejected for the present by Congress.

Debate during 1967 centered more on changes in the system than on "total" alternatives. Changes receiving the bulk of attention were a lottery for selection, the elimination of student deferments, and the standardization of selection criteria.

The President's National Advisory Commission on Selective Service focused its attention on such changes and rejected total alternatives. Its recommendations were as follows: that the age of liability be from 19 to 25 years of age, with the youngest men being called first rather than last; that the order of induction be determined by lottery from a national pool rather than by date of birth from state and local pools, with a registrant liable for induction only in a national emergency after a 1-year period of maximum vulnerability; that student deferments be eliminated except for those currently enrolled, who would be allowed to finish college before entering the pool again with 19-year-olds, or for those enrolled in officer programs; that occupational deferments be eliminated; that Selective Service policymaking be consolidated under national headquarters, which would issue binding national standards and guidelines; and that national policy be administered by eight regional offices and 300 to 500 area offices based on population, with registrants able to change boards with their residence.

The commission also advocated that local boards no longer serve as the principal decision-making units but that they hear first appeals from decisions of the area offices; that local boards represent all elements of the public they serve; that maximum length of service for members be fixed at 5 years; that a maximum age of retirement be established; that women be eligible to serve; and that the President's power to appoint members not be limited to nominees of the governors.

The recommendations of the special civilian panel appointed by the House Armed Services Committee and chaired by retired Gen. Mark Clark were notable for their obvious contradiction of the National Commission's apparent assumption that local boards as decision-making units were obsolete. It was against a lottery and recommended the following: more local board power and flexibility, automatic student deferments for undergraduates, continuation of occupational deferments as recommended by the National Security Council, and continuation of state and local board quotas. It proposed that the Armed Services Committee receive quarterly reports from Selective service and monitor its operations.

The 1967 Legislation. The bill that finally emerged from such conflicting recommendations contained very few changes of significance. The change in the operation of the draft that was most noticeable to registrants was a reversal of the "order of call" so that the youngest men became most liable to induction rather than least. This change, however, had been made by executive order and regulation changes prior to the revision of the act. The law that emerged included the following provisions that might be considered new: it prohibited the President from instituting a lottery unless he found it "in the national interest" and had given Congress a chance to veto it; prohibited the President from ending undergraduate college deferments unless it is necessary to meet military manpower needs; and, for the first time, limited the length of service for board clerks and members and fixed a retirement age for the latter.

Obviously Congress chose to ignore most of the recommendations of the President and National Commission and to protect and preserve the main features of the Selective Service System. Most of the changes either could have been effected under the 1951 act through executive order or represented codification of existing practices, but in specifying these changes Congress took the opportunity to express itself directly on a crucial matter.

GARY L. WAMSLEY
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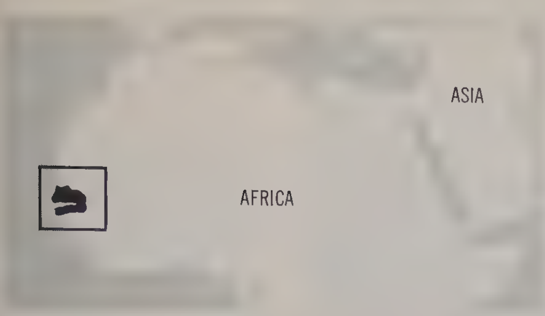
SENATE, U. S. See CONGRESS; UNITED STATES.

SENEGAL

One of Africa's most stable nations, Senegal, under the leadership of President Léopold S. Senghor, took no major departures in domestic or foreign policy in 1967. Discord within the one political party and a drought affecting the peanut crop were matters of some concern.

Internal Affairs. Elections for president and the National Assembly scheduled for 1967 were postponed one year following approval of constitutional

SENEGAL • Information Highlights



Area: 75,750 square miles (196,192 sq km).
Population: 3,580,000 (1966 midyear est.).
Chief Cities (1963 est.): Dakar, the capital, 382,980; Kaolack, 81,631; Thiès, 69,000; Saint-Louis, 58,000.
Government: *President*—Léopold S. Senghor (took office Dec. 1, 1963). *Parliament*—National Assembly, 80 members (all belonging to the Senegalese Progressive Union).
Religious Faiths: Muslims, 90% of population; Roman Catholics, 5%; others, 5%.
Education: *Literacy rate* (1961), 6% of population aged 14 and over. *Total school enrollment* (1964)—235,958 (primary, 206,431; secondary, 21,667; technical and higher, 7,860).
Finance (1967–68 est.): *Revenues,* $145,600,000; *expenditures,* $145,600,000; *monetary unit,* CFA franc (246.85 francs equal U. S.$1).
Gross National Product (1966): $696,000,000.
Economic Indexes (1966): *Industrial production,* 160 (1958=100); *cost of living,* 131 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 194,400; gasoline, 93,000; wheat flour, 75,000; meat (1963), 31,000; beer, 9,300; lumber, 6,000 cubic meters.
Crops (metric tons): Peanuts (1966–67), 798,160; millet and sorghum (1966–67), 460,000; cassava (1965–66), 170,000; sweet potatoes and yams (1965–66), 7,000.
Minerals (metric tons, 1965): Calcium phosphate (1966), 1,074,751; salt, 51,000; titanium compound (1964), 1,320.
Foreign Trade (1966): *Exports,* $148,878,000 (chief export, 1965: peanuts and peanut oil, $90,584,400); *imports,* $160,987,500 (chief imports, 1965: cereals and preparations, $27,105,200; textile yarn and fabrics, $23,661,900; rice, $18,132,300). *Chief trading partner* (1965): France (took 80% of exports, supplied 53% of imports).
Transportation: *Roads* (1965), 9,107 miles (14,653 km); *motor vehicles* (1965), 47,900; *railways* (1964), 242 miles (390 km); *principal airport,* Dakar.
Communications: *Telephones* (1967): 25,513; *radios* (1964), 200,000; *newspapers* (1964), 1.

reforms by the National Council of the Senegal Progressive Union (UPS). The major reforms will lengthen the presidential term to five years and permit ministers to retain their seats in the Assembly.

The merger in 1966 of the last opposition party with the ruling UPS made Senegal a one-party state. Nevertheless, there remained many stresses within the UPS. In February the parliamentary leader of the party, Demba Diop, was murdered in Thiès. Two deputies to the National Assembly and 11 citizens were implicated in the plot. On March 22, at the Tabaski Festival in Dakar, an attempt was made on the life of President Senghor. The would-be assassin, a former diplomat, was connected with the group supporting imprisoned former premier Mamadou Dia. On April 30 fighting between two factions of the UPS broke out at Velingara in the Casamance River basin, and one person was killed.

Foreign Policy. President Senghor remained the foremost spokesman for a commonwealth of French-speaking states and for regionalization.

The charge of being a "tool of the neocolonialists" made by President Sékou Touré of Guinea had no effect on Senegal's policies. Strained relations with Guinea continued in 1967, and, ostensibly for economy, Senegal closed its embassy there. Embasies in Liberia and Sierra Leone had been closed in 1966.

In March, Senegal warned Portugal about invasions of Senegalese territory from Portuguese Guinea. Over 60,000 refugees from the civil war there are in Senegal. In April, Senghor signed a treaty of association and cooperation with Gambia.

Economy. Since independence in 1960, Senegal has expanded its industrial base, and since 1956 the gross national product has increased by 75%. Nevertheless, Senegal is dependent on monoculture, with peanuts being the basic money earner for both individuals and the state. Thus its economic future is at the mercy of world market prices, which fluctuate greatly. A severe drought and consequent reduced peanut harvest lowered the farmers' earnings by 35% in 1967. Despite this, the gap between imports and exports has narrowed from $50 million in 1964 to about $12 million in 1966.

Senegal, which maintains an inflated civil service, has had budgetary problems. But in 1967, for the first time since independence, there was a budget surplus of $400,000.

France continued to provide substantial aid. In January 1967, France granted $3.25 million, and in September, an additional $0.5 million in technical aid, as well as $1 million in low-interest loans to finance rice growing.

HARRY A. GAILEY
San Jose State College

SHIPPING

The use of intermodal containers in the foreign trade of the United States continued to expand in 1967, thus bringing closer the realization of a worldwide integrated system combining road, rail, and water transportation.

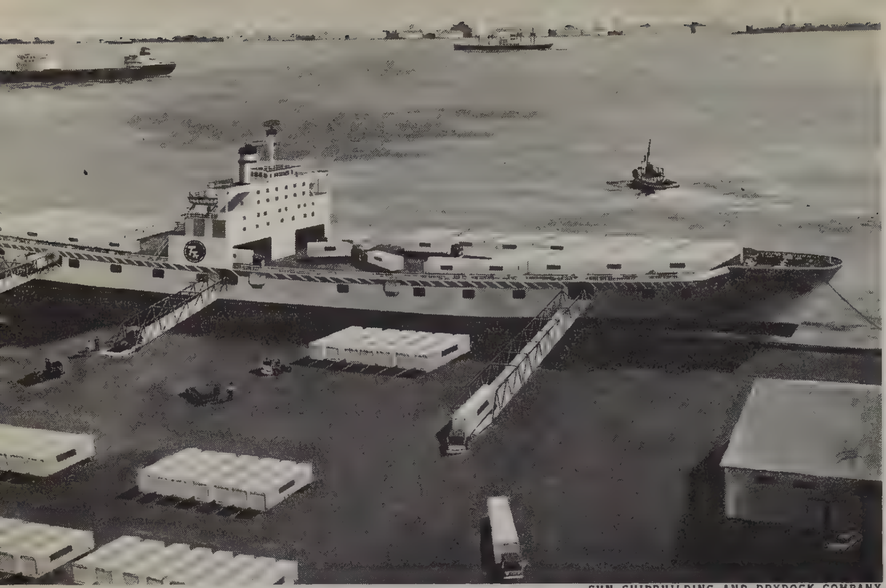
Eighty-seven U. S. flag vessels had full or partial capacity to handle containers or vehicles, or both, in late 1967. Thirty-four of these vessels were built with the aid of construction differential subsidy. There also were 29 full or partial containerships under construction or on order in U. S. shipyards. In addition seven vessels were being converted to containerships. About 70,000 intermodal containers were in service throughout the world at the end of 1967. Some 50,000 of them were owned by U. S. operators.

A number of problems in container use remain to be resolved. It is essential, for example, that the documents required to process the shipment move as quickly as the goods themselves. One standard package of aligned documents, capable of being produced from a single reproducible master, has been developed in the United States; another standard package has been developed independently in Europe. In international forums in 1967 great strides were made in aligning the two formats in efforts to achieve a single system of documentation.

MERCHANT FLEETS OF THE WORLD
(1,000 gross tons and over)

	Jan. 1, 1967		Jan. 1, 1966	
	Ships	Gross tons	Ships	Gross tons
World total	18,423	161,006,000	18,329	151,868,000
United States	2,278	20,065,000	2,376	20,684,000
Privately owned	965	10,368,000	948	10,149,000
Government owned	1,313	9,697,000	1,428	10,535,000
Liberia	1,429	21,432,000	1,313	18,919,000
Britain	1,985	19,952,000	2,052	19,853,000
Norway	1,356	16,568,000	1,365	15,503,000
Japan	1,406	13,447,000	1,333	10,886,000
USSR[1]	1,343	8,007,000	1,345	7,421,000
Greece	952	7,229,000	916	7,176,000
Italy	586	5,524,000	588	5,209,000
West Germany	860	5,401,000	843	5,067,000
France	537	4,989,000	542	4,826,000
Other countries	5,691	38,392,000	5,656	36,324,000

[1] Source material limited. (Source: Maritime Administration, U.S. Department of Commerce.)



SUN SHIPBUILDING AND DRYDOCK COMPANY

PONCE DE LEON, trailership built for service between New York and Puerto Rico, was launched in November. The vessel, shown in an artist's rendering, differs from the conventional container ship in that all trailers are driven on and off by means of side ramps, allowing for a dockside turnaround time of only 12 hours.

Vietnam Supply Run. U. S. merchant ships continued to play a vital role in the military effort in Vietnam in 1967. On September 30, 165 government-owned merchant vessels—all withdrawn from the National Defense Reserve Fleets—were operating under General Agency Agreement to meet the needs of the military. On the same date, 168 privately owned dry cargo ships and 52 tankers were under charter to the Military Sea Transportation Service.

On Jan. 1, 1967, the U. S. oceangoing merchant fleet of ships of 1,000 gross tons and over totaled 2,278 ships, of which 1,313 were government owned.

Ship Construction. Forty-five oceangoing merchant ships—37 freighters and 8 tankers—were under construction or on order in the United States on June 30, 1967. In addition, five ships were being built for government account by the Maritime Administration, four for the Coast and Geodetic Survey, and one for the National Science Foundation. Fifteen privately owned ships also were being converted in U. S. shipyards.

U. S. Oceangoing Ships in Foreign Trade. Fourteen U. S. steamship companies hold contracts with the government for financial assistance in operating ships on the essential trade routes and services of the United States. On Sept. 30, 1967, 313 ships were operating under these contracts.

Preliminary census data for 1966 indicate that U. S. commercial oceanborne foreign trade reached 404 million tons and was valued at over $36 billion. U. S. flag ships carried 29.1 million long tons, or 7.2% of the world total. This cargo was valued at $8.1 billion, or 22.4% of the total value of U. S. commercial oceanborne foreign trade.

U.S. FLAG OCEANGOING MERCHANT FLEET
(1,000 gross tons and over)

	Jan. 1, 1967		Jan. 1, 1966	
	Ships	Dwt. tons	Ships	Dwt. tons
United States: Total	2,278	27,225,000	2,376	28,283,000
Combination passenger-cargo	227	1,493,000	227	1,488,000
Freighters	1,673	17,384,000	1,747	18,127,000
Bulk carriers	59	1,064,000	61	1,107,000
Tankers	319	7,284,000	341	7,561,000
Privately owned: Total	965	14,961,000	948	14,650,000
Combination passenger-cargo	27	238,000	27	238,000
Freighters	606	6,947,000	585	6,651,000
Bulk carriers	57	1,042,000	60	1,069,000
Tankers	275	6,734,000	276	6,665,000
Government owned: Total	1,313	12,264,000	1,428	13,633,000
Combination passenger-cargo	200	1,255,000	200	1,250,000
Freighters	1,067	10,437,000	1,162	11,476,000
Bulk carriers	2	22,000	1	11,000
Tankers	44	550,000	65	896,000

Source: Maritime Administration, U.S. Department of Commerce.

J. W. GULICK
Acting Maritime Administrator

SHOWS. For animal shows, see SPORTS. For musical and theatrical shows, see DANCE; MOTION PICTURES; MUSIC; THEATER; and for art shows see ART.

SIERRA LEONE

Sierra Leone was added to the list of African countries with military governments in 1967 by a double coup d'etat stemming from the inconclusive results of the parliamentary elections held March 17.

A month earlier, Prime Minister Sir Albert Margai had announced the discovery of a plot to murder him and several other government officials. He declared that the attempted coup had been quickly put down with the support of President Sékou Touré of Guinea, who under a 1965 defense agreement moved troops to the Sierra Leone border.

Political Crisis. Early on March 21, Governor General Sir Henry Lightfoot-Boston appointed and swore in Siaka P. Stevens, leader of the opposition All People's Congress, to replace Prime Minister Margai, leader of the People's party that had held power since Sierra Leone became an independent member of the Commonwealth in 1961. Brigadier David Lansana, commander of the armed forces, promptly arrested Sir Henry and Prime Minister Stevens, charging that the governor general had acted illegally in naming Stevens as head of government before the election results were officially announced. Lansana was accused by Stevens' supporters of acting on the orders of former Prime Minister Margai.

Military Coup. In a second bloodless coup on March 23, a group of junior army officers deposed Lansana. He was arrested and former prime ministers Margai and Stevens were placed under "protective custody." The junta declared martial law and suspended the constitution and all political activities. Lt.-Col. Ambrose P. Genda, who was serving with the Sierra Leone mission to the UN, was named chairman of an 8-man National Reformation Council.

SIERRA LEONE • Information Highlights

ASIA
AFRICA

Area: 27,699 square miles (71,740 sq km).
Population: 2,403,000 (July 1, 1966 est.).
Chief Cities: Freetown (1966 est.), the capital, 148,000. Bo (1963 census), 26,613.
Government: *Chairman of National Reformation Council*—Lt.-Col. Andrew Juxon-Smith (appointed March 27, 1967). *Parliament*—House of Representatives, 75 members (dissolved March 26, 1967, by military regime).
Education: *Total school enrollment* (1964)—136,325 (primary, 119,645; secondary, 12,942; teacher-training, 987; technical, 2,101; higher, 650).
Finance (1964 est.): *Revenues*, $47,306,000; *expenditures*, $55,398,000; *monetary unit*, leone (0.8333 leone equal U. S.$1 as of Nov. 20, 1967).
Gross National Product (1965): $353,080,000.
National Income (1965): $299,600,000; average annual income per person, $131.
Cost of Living Index (1966), 130 (1958=100).
Crops (metric tons): Rice (1965–66), 310,000; sweet potatoes and yams (1964–65), 61,000; palm kernels (1965–66), 49,800; cocoa beans (1966–67), 4,000.
Minerals (metric tons, 1965): Iron ore (1966), 2,232,000; bauxite, 176,400; diamonds, 1,462,000 carats.
Foreign Trade (1966): *Exports*, $82,908,000 (chief exports: diamonds, $44,324,000; iron ore, $13,678,000; palm kernels, $6,468,000); *imports*, $99,960,000 (chief imports, 1965: woven cotton fabrics, $9,801,400; distillate fuels, $5,149,200; automobiles, $3,320,800). *Chief trading partners* (1965): Britain (took 75% of exports, supplied 33% of imports); U. S. (took 1% of exports, supplied 14% of imports); Netherlands (took 11% of exports, supplied 6% of imports).
Transportation: *Roads* (1965), 4,950 miles (7,965 km); *motor vehicles* (1965), 21,316 (automobiles, 13,506); *railways* (1965), 311 miles (500 km); *national airline*, Sierra Leone Airways; *principal airport*, Lungi.
Communications: *Telephones* (1967), 4,600; *television sets* (1967), 2,000; *radios* (1965), 105,000; *newspapers* (1965), 1 (daily circulation, 15,000).

On March 27, however, the military leaders reversed themselves and named Lt.-Col. Andrew Juxon-Smith as chairman. Observers believed the change was made in order to give the council a tribal balance, since Genda is a Mende, a tribe whose members dominate the council, while Juxon-Smith is a Creole. In explaining the reasons for the March 23 coup, Juxon-Smith declared that corruption, bribery, and nepotism had "besmirched the name of Sierra Leone" and that tribalism must be destroyed.

The National Reformation Council appointed a commission to investigate the March general elections. Its report, issued in December, declared that despite outrageous "rigging" the government of former Prime Minister Margai had been defeated, and that the governor general had acted properly in appointing Stevens as prime minister. In an accompanying white paper, the National Reformation Council announced the appointment of an advisory committee to prepare for a return to civilian rule.

Economy. Britain's devaluation of the pound on November 18 led directly to a similar action by Sierra Leone. In order to maintain the stability of its currency the government devalued the leone on November 20 by 14.3%, from 0.7143 to 0.8333 leone to the U. S. dollar.

IRVING L. MARKOVITZ
Queens College, City University of New York

SILK

World silk production in 1966 showed a slight decrease and raw silk consumption a slight increase as compared with the previous year. In 1966, for the first time in the history of the silk business, Japan imported twice as much raw silk, mostly from China and Korea, as it exported to the United States and Europe. The decrease in U. S. and European imports from Japan was attributable to the high price of raw silk, which in turn was due to a well-sustained demand for home consumption in Japan.

U. S. Consumption. According to statistics compiled by the American Silk Council, Inc., U. S. consumption of raw silk during 1966 amounted to 27,880 standard bales of 132.275 pounds (60 kg), which is a decrease of 16% from 33,190 bales consumed in 1965. Imports into the United States during 1966 amounted to 28,117 bales, a decrease of 7.7%.

Table 1—RAW SILK PRODUCTION BY MAJOR COUNTRIES, 1966

Country	Metric tons	Country	Metric tons
Brazil	88	Korea, South	1,154
Bulgaria	248	Lebanon	14
China, Communist	7,500[1]	Poland	7
France	1	Rumania	10
Greece	18	Spain	49
Hungary	20	Syria	15
India	1,502	Turkey	72
Iran	145	USSR	2,833
Italy	561	Vietnam, South	40
Japan	18,694	Yugoslavia	50

[1] Estimated.

World Production. In 1966 world silk production showed an estimated total of 33,021 metric tons (36,389 short tons), a decrease of 0.63% from 33,231 metric tons (36,620 short tons) in 1965.

Table 2—RAW SILK CONSUMPTION BY MAJOR COUNTRIES, 1966

Country	Metric tons	Country	Metric tons
France	719	Japan	19,319
Germany	188	Korea, South	346
Great Britain	139	Switzerland	343
India	1,333	United States	1,671
Italy	1,453		

World Consumption. Total raw silk consumption in 1966 totaled 25,511 metric tons (28,113 short tons) compared with 25,200 metric tons (27,770 short tons) in 1965, a slight increase of 1.2%.

HANS VATERLAUS
International Silk Association

SILVER

Silver has become primarily an industrial metal rather than a monetary metal. This change was dramatized on July 14, 1967, when the United States halted its sales of Treasury silver at $1.29 an ounce.

Immediately after the Treasury action, the price of silver jumped to a record $1.87 an ounce. Makers of silverware raised their retail prices about 20%–25%. Silver is also in heavy demand for photographic film and paper, electrical and electronics contacts, brazing alloys and solders, and dental and medical items. United States coins now absorb less than one sixth of the nation's silver production. This decline in use reflects the Treasury's switch to silverless coins.

The U. S. Treasury bullion stock has dwindled steadily. It stood at 801.3 million ounces at the beginning of 1966, but it was reduced to 591.9 million ounces by year-end, and it was further dropped to 440.2 million ounces by mid-1967.

World production of silver decreased from 254.1 million troy ounces in 1965 to 253 million ounces in 1966, the U. S. Bureau of Mines reported. The major producers, in declining order, were the United States, Mexico, Canada, Peru, the USSR, Australia, and Bolivia. Late in 1965, for the first time in 10 years, the USSR returned to the London market as a seller of substantial amounts of silver.

In the United States, mine output of recoverable silver increased from 39,806,033 troy ounces in 1965 to 43,668,988 ounces in 1966, the greatest since 1942. A sharp gain in the output of new mines in Utah and from mines in Idaho accounted for most of the increase. In the first eight months of 1967, output from mines decreased 12% from the comparable period in 1966—the result of strikes.

In Canada, silver production in the first seven months of 1967 totaled 22,198,507 ounces, compared with 18,658,551 ounces in the same period if 1966.

(See also MINING.)

BERENICE B. MITCHELL
U. S. Bureau of Mines

SINGAPORE

In its second year as an independent republic, Singapore in 1967 was faced with a major overhaul of its national policies. The change was precipitated by Britain's announcement in early 1967 that it would withdraw from its bases in Singapore and Malaysia for reasons of economy. It was originally established that the withdrawal would be gradual until completion in the mid-1970's. However, in January 1968, Britain said that the removal would end earlier, by Dec. 31, 1971. Prime Minister Lee Kuan Yew subsequently stated that Singapore would develop an "Israeli-stlye" citizens' army, with women as well as men.

The bases had provided about 20% of Singapore's gross national product, and the government, already hard-pressed by its 49,000 unemployed and the annual entry of 20,000 youths into the labor market, will have to find jobs for 20,000 base employees.

Government officials acknowledged a pressing need for new defense arrangements, and welcomed Malaysian Prime Minister Abdul Rahman's initiative in convening a regional conference in August.

Economy. The economy continued to show marked improvement in 1967. For the second successive year external trade increased by more than 9%, and exports expanded somewhat more rapidly than imports.

The government enlarged its trade contracts with Communist bloc countries by signing a new trade pact with Rumania. The two countries later agreed to establish full diplomatic relations. A joint government-businessmen's trade mission to seven east European countries in August was designed to stimulate trade with those states and to explore possible joint ventures.

New fiscal incentives were included in the 1967 budget to attract foreign industry, especially export industries selling products in the world market. Profits in certain manufactured goods would be taxed at one tenth the usual company tax rate. Tax exemptions also were provided for local industries pledged to expansion programs.

The largest budgetary increase was allotted to education because of an increase in secondary school enrollment. To support the drive for industrialization, two new vocational institutes were planned.

SINGAPORE • Information Highlights

Area: 224 square miles (581 sq km).
Population: 1,914,000 (Dec. 31, 1966 est.).
Chief City (1966 est.): Singapore, the capital, 1,913,500.
Government: *President*—Inche Yusof bin Ishak (took office Dec. 3, 1959); *Prime Minister*—Lee Kuan Yew (took office May 1959). *Parliament*—Legislative Assembly, 51 members (party seating, 1967: People's Action party, 49; Barisan Sosialis, 2).
Education: *Literacy rate* (1967), 60% of population aged 15 and over. *Total school enrollment* (1964)—463,987 (primary, 348,167; secondary, 89,924; technical, 9,668; higher, 16,228).
Finance (1967 est.): *Revenues,* $197,000,000; *expenditures,* $197,000,000; *monetary unit,* Singapore dollar (3.06122 dollars equal U. S.$1).
Gross National Product (1966): $1,062,000,000.
Cost of Living Index (1966): 107 (1960=100).
Manufacturing (metric tons, 1965): Cement (1963), 194,000; beer, 34,100; meat, 19,000.
Foreign Trade (1966): *Exports,* $1,124,000,000 (chief exports, 1965: crude rubber, $220,692,000; petroleum products, $140,082,000; motor vehicles, $46,836,000; textile yarn and fabrics, $45,793,000); *imports,* $1,355,000,000 (chief imports, 1965: crude rubber, $181,315,000; petroleum products, $130,984,000; transport equipment, $66,592,000). *Chief trading partners* (1965): Malaysia (took 41% of exports, supplied 29% of imports); Britain (took 6% of exports, supplied 11% of imports); Japan (took 4% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 520 miles (837 km); *motor vehicles* (1965), 131,549 (automobiles, 108,350); *railways* (1964), 16 miles (26 km).
Communications: *Telephones* (1967): 94,089; *television sets* (1967), 94,000; *radios* (1964), 389,000; *newspapers* (1965), 12 (daily circulation, 500,000).

Foreign Relations. Post-confrontation relations with Indonesia improved slowly. Following several meetings of a newly established joint economic commission, Indonesia agreed to lift its remaining restrictions on exports to Singapore.

Singapore joined Malaysia, the Philippines, Indonesia, and Thailand in forming a new regional economic grouping, the Association of Southeast Asian Nations (ASEAN), on August 8. ASEAN's modest initial objectives included joint development programs in tourism, shopping, fisheries, and intraregional trade.

Singapore maintained friendly relations with the United States throughout 1967. Wong Lin Ken, a former history professor, was named Singapore's first ambassador to the United States on January 10. In October, Prime Minister Lee Kuan Yew visited the United States and issued a joint communique with President Johnson endorsing the U. S. administration's policy in Vietnam.

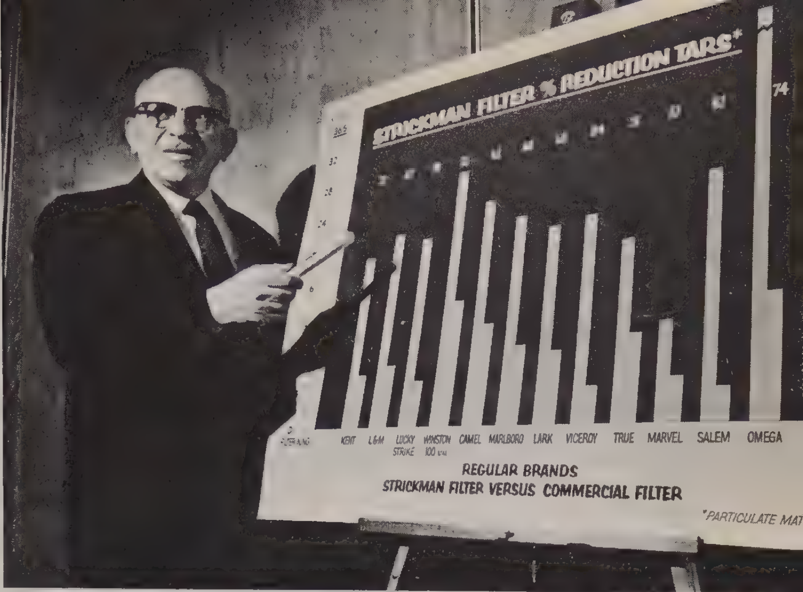
Interior Affairs. A compulsory national service system for youths over 18 years of age was instituted in July. Only 10% of registrants will be recruited for the regular army; others will serve either in the people's defense force or in the vigilante corps. In June the Singapore dollar, previously linked to the Malaysian dollar, was given independent status.

C. PAUL BRADLEY
Flint College, University of Michigan

SKIING. See SPORTS.

SMITH, Ian. See biographical sketch under RHODESIA.

ROBERT L. STRICKMAN, at a July news conference, points to a chart purporting to show the reduction in tars achieved by using his filter with various popular cigarette brands. By the year's end, however, no cigarette manufacturer was using the highly publicized new filter.



NEW YORK TIMES

SMOKING AND HEALTH

In 1967, Americans smoked 511 billion cigarettes—11 billion more than the previous year—despite mounting evidence linking smoking to a variety of diseases, including cancer, heart disease, and various respiratory ailments. It was also estimated that more than a million young people started smoking and that about 300,000 Americans died prematurely as a consequence of their having been smokers.

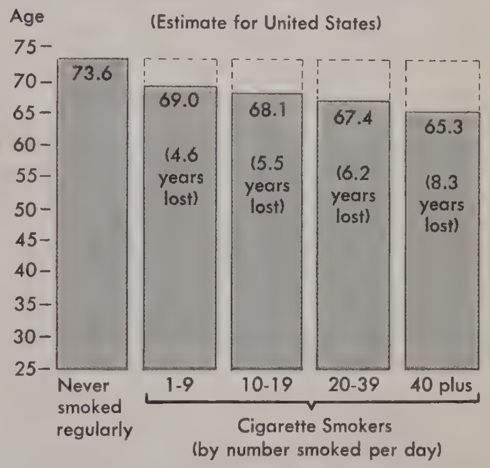
U. S. Public Health Service Report. Most medical men no longer doubt that smoking is a major health hazard. To establish the magnitude of this hazard, the U. S. Public Health Service undertook an intensive study to follow up its 1964 report on smoking. This new report, released in August 1967, was entitled *The Health Consequences of Smoking* and was based on a review of more than 2,000 laboratory, clinical, and population studies completed since 1964. It was prepared by the National Clearinghouse for Smoking and Health, a panel established in 1965 to collect, evaluate, and disseminate facts about smoking and to support research.

The new, 200-page report not only reinforced the original report's warning about smoking and respiratory disease, but also named smoking as a probable cause of death from coronary heart disease, a disease that accounts for nearly one third of the total number of deaths in the United States each year. It also described smoking as the chief cause of death from lung cancer and bronchopulmonary diseases. The report linked smoking to an unnaturally high number of deaths from peptic ulcers, stroke, and cancer of the larynx, mouth, pharynx, esophagus, and bladder, among other diseases. Cigarette smoking was found to be responsible for 11 million cases of chronic illness and 77 million lost workdays each year.

Among other studies, the report cited a 3½-year survey of more than a million men and women conducted by E. Cuyler Hammond of the American Cancer Society. This study found that the mortality rate from lung cancer among male smokers between the ages of 65 and 79 was 11.59 times greater than among nonsmokers in the same age group. It also showed that men between 45 and 54 who smoked 10 or more cigarettes a day were three times more likely to die from heart attacks than nonsmokers.

LIFE EXPECTANCY FOR 25-YEAR-OLD MEN

(Estimate for United States)



Source: Hammond, E. C., *Life Expectancy of American Men in Relation to Their Smoking Habits* (1967). Based on data from an American Cancer Society study of 447,196 men.

In an effort to establish a causal relationship that would explain the statistical link between coronary deaths and smoking, the report cited several laboratory studies indicating that the nicotine in cigarette smoke increases the heart rate and raises the blood pressure in the arteries.

The report of the Public Health Service was immediately attacked by the tobacco industry as "an inaccurate and misleading interpretation" of the scientific findings. The industry accused the Public Health Service of choosing only those research studies that tended to support the antismoking position and ignoring those that did not. The industry, through the American Tobacco Institute, contended that not enough evidence had been gathered to prove the report's assertions.

Federal Pressure on the Tobacco Industry. A few days after the Public Health Service report was released, Surgeon General William H. Stewart bitterly attacked the tobacco industry's latest innovation—the 100-millimeter cigarette. Stewart maintained that these longer cigarettes increase the smoker's total consumption of tar and nicotine, and in urging the industry to withdraw the new cigarettes from the market he accused the companies of promoting longer cigarettes for "longer profits."

The advertising practices of the tobacco industry came under the scrutiny of two other federal agencies in 1967. In June the Federal Communications Commission (FCC), which regulates the broadcasting industry, ordered that all radio and television stations carrying cigarette advertising must also broadcast antismoking public service announcements, although not necessarily on an equal-time basis. The ruling was made under the commission's long-standing "fairness doctrine" on controversial issues, but it was the first time that doctrine had been extended to paid advertising material. Although the broadcasting industry objected to the ruling, the FCC stood its ground, and the ruling went into effect, subject to judicial challenge.

Cigarette advertising was also studied by the Federal Trade Commission (FTC), which asked Congress to pass legislation requiring that a health warning be included in all cigarette advertisements. The agency declared that the tobacco industry had failed to live up to its promise to avoid advertisements appealing to teen-agers. It also asked that the wording of the mandatory health warning on cigarette packages be strengthened and that the tar and nicotine content of the cigarettes be printed on each pack. Although these proposals received much support, it seemed unlikely that Congress would be quick to enact them.

The Strickman Filter. The apparent unwillingness of smokers to heed health warnings has led to an intense effort to make smoking safe—or at least safer—without destroying its enjoyable qualities. The most publicized attempt of this type was the development of the so-called Strickman filter. This filter was devised by Robert L. Strickman, an independent chemist, in his home laboratory in New Jersey. Strickman contended that his filter reduces tar and nicotine by 70%.

The Strickman filter came to the attention of Columbia University, which then took the unusual step of publicly endorsing it at a news conference on July 13, 1967. The university, given the controlling rights to the filter, announced that it would be made available to all cigarette manufacturers. However, Columbia soon came under heavy fire for becoming involved with a product (cigarettes) linked to disease. Before long, Columbia backtracked, and its president, Grayson Kirk, admitted that the school's endorsement of the filter had been premature and regrettable. He said that no license to produce the filter would be issued until an extensive testing program had confirmed the filter's efficacy and acceptability to the smoking public. In February 1968, Columbia gave up its rights to the new filter, whereupon the Strickman Foundation was formed to collect royalties on the filter and aid the advance of medical research.

First World Conference. The first World Conference on Smoking and Health was held in New York City in September 1967. Delegates from all over the world discussed various means of controlling the risks involved in smoking. Among the many recommendations that were made was the establishment of clinics to help smokers find out why they smoke as a possible means of helping them break the habit.

Robert Reinhold
The New York "Times"

SOCCER. See Sports.

SOCIAL SECURITY

After extensive hearings and debate, the U. S. Congress passed a $3.6 billion increase in social security benefits just before adjourning on Dec. 15, 1967. The bill provides for a 13% increase in cash benefits and raises the amount a recipient may earn without loss of benefits to $1,680. Several provisions of the bill affect the Medicare program, which completed its first year of operation in July 1967.

The finally accepted social security measure was essentially in the form approved by the House in August. A more liberal, Senate version of the bill would have granted the 15% cash benefit increase asked by the administration. Both bills, however, fell short of earlier administration requests for extensive changes in federal-state welfare programs. The approved bill placed restrictions on welfare aid to dependent children, arousing the opposition of liberal congressmen. (See Child Welfare.)

Social Security Revisions. The major change made in the Social Security Act by 1967 legislation was a 13% rise in old-age, survivors, and disability cash benefits. The minimum monthly retirement benefits were raised to $55.

Next to the raise in cash benefits, the most important provision of the new bill affected the annual amount a retired worker or widow may earn without losing his benefits. The previous maximum of $1,500 was raised to $1,680.

To help finance the expanded program, the annual amount of earnings taxable and creditable for benefit purposes was raised from $6,600 to a maximum of $7,800. The schedule of rates was also revised (see below). Other provisions of the new social security measure redefined insured status for disability benefits for workers disabled before the age of 31, and provided for automatic coverage of members of religious orders, unless exemption is requested. The new benefit provisions were scheduled to become effective in February 1968, and the financing and coverage provisions on Jan. 1, 1968.

Changes in Medicare. Several of the new amendments to the Social Security Act also affected Medicare. Effective Jan. 1, 1968, each person enrolled in Medicare will be guaranteed a lifetime reserve of 60 days of coverage for hospital benefits after the 90 days in a "spell of illness" are exhausted. Other provisions of the new bill were designed to liberalize certain aspects of Medicare coverage and to expedite financial arrangements.

These provisions modify the method of paying physicians' bills, cover nonroutine services of podiatrists, eliminate the requirement for physician certification of the need for hospital care or outpatient services, call for annual enrollment periods (from January to March) for the supplementary medical insurance program, provide payment for "emergency" services in nonparticipating hospitals, permit payments for outpatient physical therapy services, liberalize the requirements defining eligibility of individuals presently not insured for hospital insurance benefits, and authorize the secretary of health, education, and welfare to experiment with reimbursement methods that would provide incentives for lowering costs while maintaining quality.

Medicare Operations. In its first full year of operation, Medicare provided hospital care for about 4 million of the 19 million persons enrolled in the hospital insurance program. The average hospital stay was 13.3 days.

Most U. S. citizens 65 years old and over became eligible on July 1, 1966, for hospital insurance benefits and, on a voluntary basis, for supplementary medical insurance benefits. On Jan. 1, 1967, they became eligible for services in extended-care facilities. The medical insurance program enrolled 17.9 million persons aged 65 and over. By the end of September 1967, about 17.7 million medical bills had been paid under this program. The total reasonable charges for these bills amounted to $1,185,507,000, of which about 70% was reimbursed by Medicare.

To finance the hospital insurance benefits, workers and their employers and self-employed persons paid 0.5% on earnings up to $6,600 during 1967. The 1967 amendments raised the rate to 0.6% beginning Jan. 1, 1968, on earnings up to $7,800. Persons enrolling under the supplementary medical insurance program paid a $3 monthly premium in 1967, and the federal government also paid $3.

In September 1967, Congress extended to March 31, 1968, the first general enrollment period for the voluntary part of Medicare, which was to have lasted from October to December 1967. The $3 monthly premium was scheduled to remain in effect through March 1968, and the new premium of $4 to become effective in April 1968.

Old-Age, Survivors, and Disability Insurance. Employers and employees each paid contributions in 1967 at a rate of 3.9% (and the self-employed at 5.9%) on earnings up to $6,600. Under the new law, the rate for 1968 is changed to 3.8% for workers and their employers and to 5.8% for the self-employed. The total contribution rate for OASDI and Medicare combined thus remains the same as in 1967—4.4% each for employees and employers and 6.4% for the self-employed.

In the 1967 fiscal year, monthly benefits and lump-sum payments totaled $20,746,553,000. In October 1967, monthly benefits were paid to 23,429,300 persons, about two thirds of whom were 65 or over. The average payment to a retired worker in October 1967 was $85.25 (not counting any payments to his dependents), and the average disabled-worker benefit was $98.36.

ROBERT M. BALL
Commissioner, Social Security Administration

SOCIAL WELFARE. See CHILD WELFARE; OLD AGE; SOCIAL SECURITY.

SOCIALISM

In representative conferences in 1967, the Socialist International condemned the overthrow of parliamentary government in Greece, urged that the causes of conflict between Israel and the Arab world be removed, pressed for a negotiated settlement of the Vietnam War, and recommended further political integration of Europe.

Britain. In 1967 the British Labour (socialist) government, under Prime Minister Harold Wilson, renationalized 14 major steel companies, substantially increased public provision for social services, eliminated hereditary succession to the House of Lords in favor of a selection of peers, devalued the British pound by 14.3%, granted independence to Aden and South Arabia, and applied unequivocally for entrance into the European Common Market.

The Labour party lost control of the Greater London Council (the governing body for Greater London) and was defeated in several parliamentary by-elections, ending the year with a majority of 86 seats in the House of Commons.

Clement Attlee, former Labour prime minister (from 1945 to 1951), died on October 8 at the age of 84 (see ATTLEE).

Continental Europe. On the Continent, Social Democrats continued to head the governments of Denmark, Sweden, and Finland. They also served in coalition governments in Germany, Italy, Luxembourg, and Switzerland.

In West Germany, Willy Brandt, the leader of the Social Democratic party, continued as vice chancellor and foreign minister in a Christian Democrat-Social Democrat government. Klaus Schutz, also a Social Democrat, completed a full year as mayor of West Berlin. A new party, the Union of the Democratic Left was organized to oppose what it regarded as the rightist course of the coalition government at Bonn.

French Socialists supported François Mitterand, the presidential candidate of a coalition called the Federation of the Democratic and Socialist Left, in the March elections. During the year the French Socialist party denounced President de Gaulle for opposing Britain's entry into the Common Market.

In elections in the Netherlands, the Labor party won 37 parliamentary seats—a loss of 6—and the Pacifist Socialists won 4—the same as four years previously. Socialists remained the government's chief opposition.

In municipal elections in Sweden, Social Democrats lost a little ground, but they easily maintained their place as the dominant party. In Norway, Laborites obtained 44% of the municipal vote.

Asia. The Japanese Socialist party won 140 seats —a loss of 4—and the Democratic Socialists won 30 —a gain of 7—in parliamentary elections on January 30. The Socialists remained the government's chief opposition. Among other things, they opposed the Japanese-U. S. security treaty and favored a policy of neutrality.

In India, the Praja Socialists won 13 seats in Lok Sabha, the lower house of Parliament—a gain of 5. Party candidates also won 108 seats in state legislatures—an increase of 43.

In South Korea, the Socialist party acquired legal status.

North America. In 1967 the New Democratic Party (socialist) of Canada increased its parliamentary representation in Ottawa from 21 to 25 and its provincial representation in Ontario from 7 to 20. It urged admission of Communist China to the United Nations, cessation of U. S. bombing of North Vietnam in the Vietnam War, and an increase in Canadian aid for developing countries up to 2% of the country's gross national product.

In the United States, the Socialist party likewise continued to urge cessation of the bombing of North Vietnam. It called for a start of peace negotiations between the representatives of warring factions, including the National Liberation Front, and an expansion of the U. S. program of pacification and social reform in South Vietnam. On the domestic front the party advocated a comprehensive planned attack on poverty; adoption of a system of guaranteed annual income; a comprehensive program of racial equality; and a drastic expansion of public housing, education, health, and social security programs.

HARRY W. LAIDLER
Author of "A History of Socialism"

SOCIETIES AND ORGANIZATIONS

This article lists a selection of some of the most noteworthy associations, societies, foundations, and trusts of the United States and Canada. The information for each listing has been furnished by the organization concerned, and includes membership figures, dates of annual meetings, officers, and headquarters location or address.

Alcoholics Anonymous (The General Service Board of A. A., Inc.). Membership: approximately 350,000 in more than 13,000 affiliated groups. Annual conference: New York, N. Y., April 22–27, 1968. Chairman, John L. Norris, M. D. Headquarters: 305 East 45th St., New York, N. Y. 10017.

American Academy of Arts and Letters. Membership: 50. Annual meeting: New York, N. Y., December 1967. President, Allan Nevins; secretary, John Hersey. Headquarters: 633 West 155th St., New York, N. Y. 10032.

American Academy of Arts and Sciences. Membership: approx. 2,300. Annual meeting: Boston, Mass., May 8, 1968. President, Talcott Parsons; secretary, Raymond A. Bauer. Headquarters: 280 Newton St., Brookline Station, Boston, Mass. 02146.

American Academy of Political and Social Science. Membership: 22,027, including 6,452 libraries. Annual meeting: Philadelphia, Pa., April 5–6, 1968. President, James C. Charlesworth; business mgr., Ingeborg Hessler. Headquarters: 3937 Chestnut St., Philadelphia, Pa. 19104.

American Anthropological Association. Membership: 4,500. Annual meeting: Seattle, Wash., Nov. 21–24, 1968. President, Irving Rouse; exec. secretary, Charles Frantz. Headquarters: 3700 Massachusetts Ave. NW, Washington, D. C. 20016.

American Association for the Advancement of Science. Membership: 113,900 and 294 affiliated groups. Annual meeting: Dallas, Texas, Dec. 26–31, 1968. President, Walter Orr Roberts; secretary, Dael Wolfle. Headquarters: 1515 Massachusetts Ave. NW, Washington, D. C. 20005.

American Association of University Professors. Membership, 90,000. Annual meeting: Washington, D. C., April 26–27, 1968. President, Clark Byse; general secretary, Bertram H. Davis. Headquarters: 1785 Massachusetts Ave., Washington, D. C. 20036.

American Association of University Women. Membership: 175,000. President, Anne Gary Pannell; gen. dir., Francena L. Miller. Headquarters: 2401 Virginia Ave. NW, Washington, D. C. 20037.

American Astronomical Society. Membership: 2,200. Meeting: Dominion Astrophysical Observatory, Victoria, B. C., Canada, August 21–23, 1968. President, A. E. Whitford; secretary, G. C. McVittie; exec. officer, Paul M. Routly. Headquarters: 211 FitzRandolph Rd., Princeton, N. J., 08540.

American Automobile Association. Membership: 10.4 million in 820 affiliated groups. Annual meeting: Washington, D. C., Oct. 17–19, 1967. President, George M. Frauenheim; secretary, William B. Spencer. Headquarters: 1712 G St. NW, Washington, D. C. 20006.

American Bankers Association. Membership: 18,452 commercial banks and branches. Annual meeting: Chicago, Ill., Sept. 29–Oct. 2, 1968. Pres., J. Howard Laeri; sec., Henry M. Sommers. Headquarters: 90 Park Ave., New York, N. Y. 10016.

American Bar Association. Membership: 127,000. Annual meeting: Philadelphia, Pa., Aug. 5–9, 1968. President, Earl F. Morris; secretary, W. Reece Smith, Jr. Headquarters: 1155 E. 60th St., Chicago, Ill. 60637.

American Bible Society. Membership: 183,000. Annual meeting: New York, N. Y., May 9, 1968. President, Edmund F. Wagner; general secretaries, Robert T. Taylor, Laton E. Holmgren; treasurer, Charles W. Bass. Headquarters: 1885 Broadway, New York, N. Y. 10023.

American Book Publishers Council. Membership: approx. 195. Annual meeting: Washington, D. C., May 22–23, 1968. President, Charles Scribner, Jr.; senior associate managing director and economist, Robert W. Frase, associate managing director, Kyrill Schabert. Headquarters: One Park Ave., New York, N. Y. 10016.

American Booksellers Association, Inc. Membership: 2,800. National convention: Washington, D. C., June 2–5, 1968. President, Theodore Wilentz; exec. dir., Joseph A. Duffy. Headquarters: 175 Fifth Ave., New York, N. Y. 10010.

American Cancer Society, Inc. Membership: 182 voting members; 58 chartered divisions. Annual meeting: New York, N. Y., Oct. 21–23, 1968. President, Roger A. Harvey, M. D.; secretary, Joseph S. Silber. Headquarters: 219 East 42nd St., New York, N. Y. 10017.

American Chemical Society. Membership: 110,000. National meetings, 1968: San Francisco, Calif., March 31–April 5; Atlantic City, N. J., Sept. 8–13. President, Robert W. Cairns; executive secretary, B. R. Stanerson. Headquarters: 1155 16th St. NW, Washington, D. C. 20036.

American Civil Liberties Union. Membership: 120,000. Exec. dir., John de J. Pemberton, Jr.; board chairman, Ernest Angell. Headquarters: 156 Fifth Ave., New York, N. Y.

American College of Physicians. Membership: 13,596. Annual meeting: Boston, Mass., April 1–5, 1968. President, R. H. Kampmeier, M. D.; exec. director, Edward C. Rosenow, Jr., M. D. Headquarters: 4200 Pine St., Philadelphia, Pa. 19104.

American College of Surgeons. Membership: 29,000. Annual meeting: Atlantic City, N. J., Oct. 14–18, 1968. President, Reed M. Nesbit, M. D.; director, John Paul North, M. D. Headquarters: 55 E. Erie St., Chicago, Ill. 60611.

American Council of Learned Societies. Membership: 33 professional societies concerned with the humanities and the humanistic aspects of the social sciences. Annual meeting: Princeton, N. J., Jan. 18–20, 1968. President, Frederick Burkhardt; admin. secy., Charlotte Bowman. Headquarters: 345 East 46th St., New York, N. Y. 10017.

American Council on Education. Membership: 1,277 colleges and universities, and 199 educational organizations plus 51 affiliate organizations. Annual meeting: Denver, Colo., Oct. 9–11, 1968. President, Logan Wilson; exec. secretary, Charles G. Dobbins. Headquarters: 1785 Massachusetts Ave. NW, Washington, D. C. 20036.

American Dental Association. Membership: 108,078. Annual session: Miami Beach, Fla., Oct. 28–31, 1968. President, F. Darl Ostrander, D. D. S.; secretary, Harold Hillenbrand, D. D. S. Headquarters: 211 East Chicago Ave., Chicago, Ill. 60611.

American Economic Association. Membership: 15,719 and 5,471 subscribers. Annual meeting: Chicago, Ill., Dec. 28–30, 1969. President, Kenneth Boulding; secretary, Harold F. Williamson. Headquarters: 629 Noyes St., Evanston, Ill. 60201.

American Farm Bureau Federation. Membership: 1,703,908 families. Annual meeting: Chicago, Ill., Dec. 11–14, 1967. President, Charles B. Shuman; secretary-treasurer, Roger Fleming. Headquarters: Merchandise Mart, Chicago, Ill. 60654.

American Geographical Society. Membership: 4,200. Annual dinner: New York, N. Y., Nov. 30, 1967. President, Serge A. Korff; director, Shannon McCune. Headquarters: Broadway at 156th St., New York, N. Y. 10032.

American Geophysical Union. Membership: 8,900 and 53 organizations. Annual meeting: Washington, D. C., April 8–11, 1968. President, William C. Ackermann; gen. secy., A. Nelson Sayre. Headquarters: 2100 Pennsylvania Ave. NW, Washington, D. C. 20037.

American Heart Association. Membership: 72,000 in 55 affiliates, 175 chapters, and 1,400 local organizations. Annual meeting: Bal Harbour, Fla., Nov., 21–26, 1968. President, Jesse E. Edwards, M. D.; secretary, Albert M. Baer. Headquarters, 44 East 23rd St., New York, N. Y. 20020.

American Historical Association. Membership: 15,500. Annual meeting: Toronto, Ont., Dec. 28–30, 1967. President, Hajo Holborn; exec. secretary, Paul L. Ward. Headquarters: 400 A St. SE, Washington, D. C. 20003.

American Home Economics Association. Membership: 28,000 in 52 state affiliated organizations. Annual meeting: Minneapolis, Minn., June 24–28, 1968. President, Mrs. Helen J. Mandigo; secretary, Dr. Betty Jean Brannan. Headquarters: 1600 20th St. NW, Washington, D. C. 20009.

American Horticultural Society, Inc. Membership: 4,500 individual; 175 organizational. National convention: San Francisco, Calif., Sept. 18–22, 1968. President, Fred Galle; secretary-treasurer, Mrs. Grace P. Wilson. Headquarters: 1600 Bladensburg Rd. NE, Washington, D. C. 20002.

American Hospital Association. Membership: 10,076 personal; 9,082 institutional. Annual meeting: Atlantic City, N. J., Sept. 16–19, 1968. President, David B. Wilson, M. D.; exec. vice-pres., Edwin L. Crosby, M. D.; secretary, James E. Hague. Headquarters: 840 N. Lake Shore Dr., Chicago, Ill. 60611.

American Institute of Aeronautics and Astronautics. Membership: 33,000. Annual meeting: Philadelphia, Pa., Oct. 21–25, 1968. Exec. secretary, James J. Harford. Headquarters: 1290 Avenue of the Americas, New York, N. Y. 10019.

American Institute of Architects. Membership: 19,700. National conventions: Portland, Ore., June 23–26; Honolulu, Hawaii, June 28–29, 1968. President, Robert L. Durham; secretary, Rex Whitaker Allen. Headquarters: 1735 New York Ave. NW, Washington, D. C. 20006.

American Institute of Biological Sciences. Membership: 14,000, with 47 adherent societies and 25 industrial member groups. Annual meeting: Ohio State University, Columbus, Ohio, Sept. 3–7, 1968. President, Dr. W. D. McElroy; vice president, Dr. LaMont C. Cole; secretary-treasurer, Dr. Robert W. Krauss. Headquarters: 3900 Wisconsin Ave. NW, Washington, D. C. 20016.

American Institute of Certified Public Accountants. Membership: 61,000. Annual meeting: Washington, D. C., Oct. 14, 1968. President, Marvin L. Stone; exec. vice president, Leonard M. Savoie, admin. vice president and secretary, John L. Carey. Headquarters: 666 Fifth Ave., New York, N. Y. 10019.

American Institute of Chemical Engineers. Membership: 31,028. Annual meetings: New York, N. Y., Nov. 26–30, 1967; Los Angeles, Calif., Dec. 1–5, 1968. President, M. S. Peters; secretary, F. J. Van Antwerpen. Headquarters: 345 East 47th St., New York, N. Y. 10017.

American Institute of Graphic Arts. Membership: 1,800. President, George Tscherny; secretary, Mrs. Frederick P. Young, Jr. Headquarters: 1059 Third Avenue, New York, N. Y. 10021.

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. Membership: 43,222. Annual meeting: New York, N. Y., Feb. 25–29, 1968. President, John R. McMillan; exec. director and secretary, R. William Taylor. Headquarters: 345 East 47th St., New York, N. Y. 10017.

American Legion, The. Membership: 2,580,000. National Convention: Boston, Mass., Aug. 25–31, 1967. National Commander, William E. Galbraith; National Adjutant, William F. Hauck (Acting). Headquarters: 700 N. Pennsylvania St., Indianapolis, Ind. 46206.

American Management Association. Membership: 54,000. Annual meeting: New York City, Sept. 25, 1968. President, Lawrence A. Appley; secretary, Fred E. Lee. Headquarters: 135 West 50th St., New York, N. Y. 10020.

American Mathematical Society. Membership: 12,000. Annual meeting: San Francisco, Calif., Jan. 23–27, 1968. President, C. B. Morrey; secretary, E. Pitcher. Headquarters: P. O. Box 6248, Providence, R. I. 02904.

American Medical Association. Membership: 214,691. Annual meeting: San Francisco, California, June 16–20, 1968. President, Milford O. Rouse, M. D.; secretary-treasurer, Joseph B. Copeland, M. D. Headquarters: 535 N. Dearborn St., Chicago, Ill. 60610.

American Meteorological Society. Membership: 8,200 in 130 corp. members. Annual meeting: San Francisco, Calif., Jan. 29–Feb. 1, 1968. President, Prof. Verner E. Suomi; exec. director, Dr. Kenneth C. Spengler; secretary-treasurer, David F. Landrigan. Headquarters: 45 Beacon St., Boston, Mass. 02108.

American National Red Cross. Adult membership: 30,500,000 in 3,300 chapters. National convention: Denver, Colo., May 6–8, 1968. Chairman, E. Roland Harriman; President, James F. Collins. Headquarters: 17th and D Sts. NW, Washington, D. C. 20006.

American Newspaper Publishers Association. Membership: 1,005. Annual convention: New York, N. Y., April 22–25, 1968. President, J. Howard Wood; secretary, Eugene C. Bishop. Headquarters: 750 Third Ave., New York, N. Y. 10017.

American Nurses Association. Membership: 170,000 in 54 state and territorial associations. National convention: Dallas, Texas, May 13–17, 1968. President, Jo Eleanor Elliott; exec. dir., Judith G. Whitaker. Headquarters: 10 Columbus Circle, New York, N. Y. 10019.

American Personnel and Guidance Association. Membership: 28,250. National convention: Detroit, Mich., April 7–11, 1968. President, Gail F. Farwell; exec. director, Willis E. Dugan. Headquarters: 1607 New Hampshire Ave. NW, Washington, D. C. 20009.

American Philological Association. Membership: 2,200. Annual meeting: Boston, Mass., Dec. 28--30, 1967. President, Frederick Malcolm Combellack; secretary-treasurer, William Warren Minton. Headquarters: Hunter College, Bronx, N. Y. 10468.

American Philosophical Association. Membership: 2,676. Annual meetings: Eastern Division—Boston, Mass., Dec. 27–29, 1967; Western Division—St. Louis, Mo., May 2–4, 1968; Pacific Division—Berkeley, Calif., Dec. 27–29, 1967. Chairman, Charles A. Baylis; secretary, Robert G. Turnbull. Headquarters: 216 N. Oval Dr., Columbus, Ohio. 43210.

American Physical Society. Membership: 24,000 American and foreign members. Annual meeting: Chicago, Ill., Jan. 29–Feb. 1, 1968. President, Dr. C. H. Townes; executive secretary, W. W. Havens, Jr. Headquarters: 335 East 45th St. New York, N. Y. 10017.

American Political Science Association. Membership: 14,000. Annual meeting: Washington, D. C., Sept. 3–7, 1968. President, Merle Fainsod; exec. dir., Evron M. Kirkpatrick. Headquarters: 1527 New Hampshire Ave. NW, Washington, D. C. 20036.

American Psychiatric Association. Membership: 15,813 district branches in U. S. Annual meeting: Boston, Mass., May 13–17, 1968; President, Henry W. Brosin, M. D.; secretary, Robert S. Garber, M. D.; medical director, Walter E. Barton, M. D. Headquarters: 1700 18th St. NW, Washington, D. C. 20009.

American Psychological Association. Membership: 27,284. Annual meeting: San Francisco, Calif., Aug. 30–Sept. 3, 1968. President, Abraham H. Maslow; executive officer, Arthur H. Brayfield. Headquarters: 1200 17th St. NW, Washington, D. C. 20036.

American Society for Microbiology. Membership: 11,500 and 35 local branches. Annual meeting: Detroit, Mich., May 5–10, 1968. President, S. E. Luria; secretary, D. E. Shay, Headquarters: 115 Huron View Blvd., Ann Arbor, Mich. 48103.

American Society of Civil Engineers. Membership: 60,000. Annual meeting: Pittsburgh, Pa., Oct. 14–18, 1968. President, Richard A. Tatlow III; secretary, William H. Wisely. Headquarters: 345 East 47th St., New York, N. Y. 10017.

American Society of Composers, Authors, and Publishers. Membership: 9,252 composers and authors; 3,026 publishers. Annual meeting: New York City, March 1968. President, Stanley Adams; secretary, Paul Creston. Headquarters: 575 Madison Ave., New York, N. Y. 10022.

American Society of International Law. Membership: 3,800. Annual meeting: Washington, D. C., April 25–27, 1968. President, John R. Stevenson; exec. director, Stephen M. Schwebel. Headquarters: 2223 Massachusetts Ave. NW, Washington, D. C. 20008.

American Society of Mechanical Engineers. Membership: 60,161. President, Louis N. Rowley; exec. director and secretary, O. B. Schier, II. Headquarters: 345 East 47th St., New York, N. Y. 10017.

American Society of Newspaper Editors. Membership: 680. National convention: Washington, D. C., April 16–19, 1968. President, Michael J. Ogden; secretary, Newbold Noyes. Headquarters: 750 Third Ave., New York, N. Y. 10017.

American Sociological Association. Membership: 11,000. Annual meeting: Boston, Mass., Aug. 25–29, 1968. President, Philip M. Hauser; secretary, Robin M. Williams, Jr. Headquarters: 1001 Connecticut Ave. NW, Washington, D. C. 20036.

American Statistical Association. Membership: 10,000. Annual meeting: Pittsburgh, Pa., Aug. 20–23, 1968. President, Dr. Geoffrey H. Moore; secretary, John W. Lehman. Headquarters: 810 18th St. NW, Washington, D. C. 20006.

American Textbook Publishers Institute. Membership: 125. Annual meeting: Miami Beach, Fla., May 6–10, 1968. President, Lee C. Deighton; secretary, John P. Spaulding. Headquarters: 432 Park Ave. South, New York, N. Y. 10016.

American Veterans Committee. Membership: 22,000 in 60 regional groups. Annual meeting: Atlantic City, N. J., June 16–18, 1968. National chairman, Dr. Eugene D. Byrd; exec. director, June A. Willenz. Headquarters: 1830 Jefferson Place NW, Washington, D. C. 20036.

American Veterinary Medical Association. Membership: 18,362 in 50 states. Annual meeting: Boston, Mass., July 21–25, 1968. President, Robert J. Schroeder, D. V. M.; exec. secretary, M. R. Clarkson, D. V. M. Headquarters: 600 S. Michigan Ave., Chicago, Ill. 60605.

American Youth Hostels, Inc. Membership: 33,500 in 25 AYH Councils. Annual meeting: Lima, Ohio, Nov. 18–19, 1967, and annually in November. President, Stephens Dietz; secretary, Olga M. Madar. Headquarters: 20 West 17th St., New York, N. Y. 10011.

Archaeological Institute of America. Membership: 5,000; subscribers, 10,000. Annual meeting: Toronto, Ont., Dec. 28–30, 1968. President, Margaret Thompson; secretary, Claireve Grandjouan. Headquarters: 100 Washington Square East, New York, N. Y. 10003.

Arthritis Foundation, The. Membership: 79 chapters. Annual meeting: New York, N. Y., May 20, 1968. President, William S. Clark, M. D.; secretary, Edward S. Hand. Headquarters: 1212 Avenue of the Americas, New York, N. Y. 10036.

Association of Better Business Bureaus International. Membership: 131 bureaus in U. S., Canada, Israel, Mexico, Puerto Rico, and Venezuela. Annual meeting: Pittsburgh, Pa., June 2–6, 1967. President, Victor H. Nyborg. Headquarters: Chrysler Building, New York, N. Y. 10017.

Association of the Junior Leagues of America, Inc. Membership: more than 200 member Leagues in U. S., Canada, and Mexico City. Annual conference: Colorado Springs, Colo., May 5–9, 1968. President, Mrs. David A. Whitman. Headquarters: Waldorf-Astoria Hotel, New York, N. Y. 10022.

Benevolent and Protective Order of Elks. Membership: 1,417,435 in 2,091 Lodges. National Convention: New York, N. Y., July 14–18, 1968. Grand Exalted Ruler, Robert E. Boney; Grand Secretary, Franklin J. Fitzpatrick. Headquarters: 2750 Lake View Ave., Chicago, Ill. 60614.

B'nai B'rith. Membership: 500,000 in 4,492 local groups. President, William A. Wexler; exec. vice president, Rabbi Jay Kaufman. Headquarters: 1640 Rhode Island Ave. NW, Washington, D. C. 20036.

Boy Scouts of America. Membership: 5,831,541 boys and leaders in 512 Boy Scout councils. Annual meeting: Chicago, Ill., May 23–24, 1968. President, Thomas J. Watson, Jr.; Chief Scout Executive, Alden G. Barber. Headquarters: New Brunswick, N. J. 08903.

Boys' Clubs of America. Membership 700,000 in 747 clubs. National convention: Chicago, Ill., May 13–16, 1968. President, Albert L. Cole; national director, John M. Gleason. Headquarters: 771 First Ave., New York, N. Y. 10017.

Camp Fire Girls, Inc. Membership: 600,000 in 375 local councils. Quadrennial: Kansas City, Mo., Nov. 4–10, 1967. President, Mrs. Charles F. Bedford; exec. vice president, national exec. director and secretary, Hester Turner. National headquarters: 65 Worth St., New York, N. Y. 10013.

Canadian Library Association (Association Canadienne des Bibliothèques). Membership: 2,200 persons and 850 organizations. Annual conference: Jasper, Alberta, June 8–15, 1968. President, Amy Hutcheson; exec. director, Elizabeth H. Morton. Headquarters: 63 Sparks St., Ottawa 4, Ont.

Canadian Medical Association. Membership: 19,212. Annual meeting: Regina, Sask., June 17–21, 1968. President, Dr. N. J. Belliveau; gen. secretary, A. F. W. Peart, M. D. Headquarters: 150 St. George St., Toronto 5, Ontario.

Catholic Library Association. Membership: 4,100. National convention: St. Paul, Minn. April 15–18, 1968. President, Rev. Jovian Lang, O. F. M.; exec. dir., M. Richard Wilt. Headquarters: 461 W. Lancaster Ave., Haverford, Pa. 19041.

Chamber of Commerce of the United States of America. Membership: about 4,000 trade associations and local chambers, 32,000 business members, and 4,600,000 underlying membership. Annual meeting: Washington, D. C., April 28–May 1, 1968. President, Allan Shivers; exec. vice president, Arch N. Booth. Headquarters: 1615 H St. NW, Washington, D. C. 20006.

Council on Foreign Relations, Inc. Membership: 1,500. Annual meeting: New York City, Oct. 25, 1967. President, Grayson Kirk; executive director, George S. Franklin, Jr. Headquarters: 58 East 68th St., New York, N. Y. 10021.

Daughters of the American Revolution (National Society). Membership: 185,758 members in 2,883 chapters. Continental congress: Washington, D. C., April 15–19, 1968. President General, Mrs. William Henry Sullivan, Jr. Headquarters: 1776 D St. NW, Washington, D. C. 20006.

4-H Clubs. Membership: 2,750,000 in 96,000 local clubs. National conference: Washington, D. C., April 20–26, 1968. Director, Dr. E. Dean Vaughan. Address: Federal Extension Service, U. S. Dept. of Agriculture, Washington, D. C. 20250.

Freemasonry, Ancient Accepted Scottish Rite of (Northern Masonic Jurisdiction): Supreme Council, 33°. Membership: 506,635 in 387 affiliated groups. Annual meeting: Boston, Mass., Sept. 27–29, 1966. Sovereign grand commander, George A. Newbury; grand secy. gen., Laurence E. Eaton; exec. secy., Stanley F. Maxwell. Headquarters: 1117 Statler Bldg., Boston, Mass. 02116.

Freemasonry, Ancient and Accepted Scottish Rite of (Southern Jurisdiction): Supreme Council, 33°. Membership: 550,000 in 207 affiliated groups. National convention: Washington, D. C., Oct. 20–23, 1969. Sovereign grand commander, Luther A. Smith; secy. gen., C. Fred Kleinknecht, Jr. Headquarters: 1733 16th St. NW, Washington, D. C. 20009.

Future Farmers of America. Membership: 445,386 in 50 state associations. National convention: Kansas City, Mo., Oct. 11–13, 1967. National adviser, H. N. Hunsicker; secretary, William Paul Gray. Headquarters: U. S. Office of Education, Washington, D. C. 20202.

Garden Club of America, The. Membership: about 12,000 in 174 member clubs. Annual meeting: Greenwich, Conn., May 14–17, 1968. President, Mrs. Thomas M. Waller; secretary, Mrs. Charles M. Mackall. Headquarters: 598 Madison Ave., New York, N. Y. 10022.

General Federation of Women's Clubs. Membership: 11,000,000 in 16,000 affiliated groups. National convention: Boston, Mass., 1968. President, Mrs. E. D. Pearce; exec. secretary, Mrs. Stephen J. Nicholas. Headquarters: 1734 N St. NW, Washington, D. C. 20036.

Geological Society of America. Membership: 7,600. Annual meeting: Mexico City, Mexico, Nov. 11–13, 1968. President, Ian Campbell; exec. secretary, Raymond C. Becker. Headquarters: P. O. Box 1719, Colorado Building, Boulder, Colo. 80302.

Girl Scouts of U. S. A. Membership: 3,652,000. National president, Mrs. Holton R. Price, Jr.; exec. director, Louise A. Wood. Headquarters: 830 Third Ave., New York, N. Y. 10022.

Holy Name, Confraternity of the. Membership: 5,000,000 in 19,000 affiliated groups. National director: Dennis B. McCarthy. Headquarters: 141 E. 65th St., New York, N. Y. 10021.

Institute of Electrical and Electronics Engineers, Inc. Membership: 148,000. International convention, New York, N. Y., March 18–21, 1968. President, W. K. MacAdam; secretary, B. M. Oliver. Address: 345 East 47th St., New York, N. Y. 10017.

International Council of Scientific Unions (Conseil International des Unions Scientifiques). Membership: 15 international scientific unions and 959 national societies. General assembly: Paris, 1968. President, J. M. Harrison; secretary-general, K. Chandrasekharan. Headquarters: 7 Via C. Celso, Rome, Italy 00161.

Jewish War Veterans of the U. S. A. Membership: 100,000 in 750 organizations. Annual convention: Hollywood, Fla., Aug. 18–25, 1968. National Commander, Samuel Samuels; national exec. director, Monroe R. Sheinberg. Headquarters: 1712 New Hampshire Ave. NW, Washington, D. C. 20009.

Kiwanis International. Membership: 275,000 in 5,500 clubs in U. S., Canada, Mexico, Western Europe, the Far East, the Caribbean, South and Central America, New Zealand, and Australia. Annual convention: Toronto, Ont., June 30–July 4, 1968. President, James M. Moler; secretary, R. P. Merridew. Headquarters: 101 E. Erie St., Chicago, Ill. 60611.

Knights of Columbus. Membership: 1,200,000. Annual meeting: Anaheim, Calif., Aug. 13–15, 1968. Supreme knight, John W. McDevitt; supreme secretary, Virgil C. Dechant. Headquarters: 71 Meadow St., New Haven, Conn. 06507.

Knights of Pythias. Membership: 197,000 in 1,917 subordinate lodges. Biennial meeting: Philadelphia, Pa., Aug. 12–16, 1968. Supreme chancellor, Otto E. Nobis; supreme secretary, Joseph B. Hacker. Office: 1212 Dodds Ave., Chattanooga, Tenn. 37404.

League of Women Voters of the United States. Membership: 146,000. National convention: Chicago, Ill., April 29–May 3, 1968. President, Mrs. Robert J. Stuart; first vice-president, Mrs. William M. Christopherson. Headquarters: 1200 Seventeenth St. NW, Washington, D. C. 20036.

Lions International. Membership: 827,776 in 21,563 clubs in 141 countries. President, Jorge Bird; first vice president, David A. Evans. Headquarters: 209 N. Michigan Ave., Chicago, Ill. 60601.

Loyal Order of Moose. Membership: 1,073,779 in 3,801 units. National convention: Mooseheart and Chicago, Ill., June 16–20, 1968. Director general, Paul P. Schmitz; supreme secretary, Carl A. Weis. Headquarters: Mooseheart, Ill. 60539.

Modern Language Association of America. Membership: 25,167. Annual meeting: Chicago, Ill., Dec. 27–29, 1967. President, George Winchester Stone, Jr.; exec. secretary, John Hurt Fisher. Headquarters: 62 Fifth Ave., New York, N. Y. 10003.

National Academy of Sciences. Membership: 740. Annual meeting: Washington, D. C., April 22–24, 1968. President, Frederick Seitz; exec. officer, John S. Coleman. Headquarters: 2101 Constitution Ave. NW, Washington, D. C. 20418.

National Association for Mental Health, Inc. Membership: 925 state and local organizations. Annual meeting: Chicago, Ill., Nov. 15–18, 1967. President, Earl Warren, Jr.; exec. director, Brian O'Connell. Headquarters: 10 Columbus Circle, New York, N. Y. 10019.

National Association for the Advancement of Colored People. Membership: 450,000 in 1,800 units. National convention: Boston, Mass., July 10–15, 1967. President, Kivie Kaplan; exec. director, Roy Wilkins. Headquarters: 1790 Broadway, New York, N. Y. 10019.

National Association of Manufacturers. Membership: 14,000. Annual meeting: New York, N. Y., Dec. 6–8, 1967. President, W. P. Gullander; secretary, John McGraw. Headquarters: 277 Park Ave., New York, N. Y. 10017.

National Audubon Society. Membership: 54,000. Annual meeting: St. Louis, Mo., April 25–30, 1969. Executive vice president, Charles H. Callison; secretary, James H. Wickersham, Jr. Headquarters: 1130 Fifth Ave., New York, N. Y. 10028.

National Conference of Christians and Jews, Inc. Membership: 75 regional offices. Annual meeting: New York, N. Y., Nov. 12–13, 1967. President, Dr. Sterling W. Brown; secretary, Oscar M. Lazrus. Headquarters: 43 West 57th St., New York, N. Y. 10019.

National Congress of Parents and Teachers. Membership: 11,029,396 in 45,000 PTA's. National convention: Minneapolis, Minn., May 21–24, 1967. President, Mrs. Irvin E. Hendryson; secretary, Mrs. William C. Baisinger. Headquarters: 700 N. Rush St., Chicago, Ill. 60611.

National Council of the Churches of Christ in the U. S. A. Membership: 34 Protestant, Anglican, and Orthodox denominations. Triennial general assembly: Detroit, Mich., Nov. 30–Dec. 5, 1969. President, Dr. Arthur S. Flemming; general secretary, R. H. Edwin Espy. Headquarters: 475 Riverside Dr., New York, N. Y. 10027.

National Council of the Young Men's Christian Associations. Membership: 4,862,861 in 1,857 organizations. National board chairman, W. M. McFeely; exec. director, James F. Bunting. Headquarters: 291 Broadway, New York, N. Y. 10007.

National Education Association of the U. S. Membership: 1,020,000, with affiliated statewide units in every state and 8,300 local affiliates. Annual meeting: Dallas, Texas, July 1–6, 1968. President, Braulio Alonso; exec. secretary, Sam M. Lambert. Headquarters: 1201 Sixteenth St. NW, Washington, D. C. 20036.

National Federation of Business and Professional Women's Clubs, Inc. Membership: 178,500 in 3,800 clubs. National convention: Minneapolis, Minn., July 21–25, 1968. President, Mabel R. McClanahan; exec. director, Ellen C. Hermans. Headquarters: 2012 Massachusetts Ave. NW, Washington, D. C. 20036.

National Federation of Music Clubs. Membership: 800,000 in 4,300 clubs and 12 national affiliates. Annual meeting: Cleveland, Ohio, August 1968; biennial convention, Albuquerque, New Mexico, April 1969. President, Mrs. Maurice Honigman; admin. director, Lois Winterberg. Headquarters: 600 S. Michigan Ave., Chicago, Ill. 60605.

National Foundation—March of Dimes, The. Membership: 3,100 chapters. President, Basil O'Connor; senior vice-president, Joseph F. Nee. Headquarters: 800 Second Ave., New York, N. Y. 10017.

National Recreation and Park Association. Membership includes professional park and recreation leaders and citizens interested in recreation, parks and conservation. Annual congress: Seattle, Wash., Oct. 13–17, 1968. President, Endicott P. Davison; exec. vice president, Dr. Sal J. Prezioso. Headquarters: 1700 Pennsylvania Ave., Washington, D. C. 20006.

National Research Council of Canada. Membership: council 21; laboratory staff, 2,919. Annual meeting: Ottawa, Ontario, March 1968. President, Dr. W. G. Schneider; secretary, B. D. Leddy. Headquarters: Montreal Road, Ottawa 7, Ontario.

National Safety Council. Membership: 10,500. National Safety Congress and Exposition: Chicago, Ill., Oct. 23–26, 1967. President, Howard Pyle; secretary, R. L. Forney. Headquarters: 425 N. Michigan Ave., Chicago, Ill. 60611.

National Society for Crippled Children and Adults, Inc. Membership: 52 state and territorial societies. National convention: Los Angeles, Calif., Nov. 16–19, 1967. President, Theodore A. Mangelsdorf; exec. director, Sumner G. Whittier. Headquarters: 2023 W. Ogden Ave., Chicago, Ill. 60612.

National Tuberculosis Association. Membership: 1,700 affiliated groups. Annual meeting: Houston, Texas, May 19–22, 1967. President, Daniel E. Jenkins, M. D.; secretary, William Becque. Headquarters: 1740 Broadway, New York, N. Y. 10019.

National Urban League, Inc. President, Lindsley F. Kimball; secretary, Mrs. Esra H. Poston; exec. director, Whitney M. Young, Jr. Headquarters: 55 East 52nd St., New York, N. Y. 10022.

National Woman's Christian Temperance Union. Membership: 275,000 in 6,000 local unions. National convention: Philadelphia, Pa., Aug. 23–29, 1967. President, Mrs. Fred J. Tooze; secretary, Mrs. Herman Stanley. Headquarters: 1730 Chicago Ave., Evanston, Ill. 60201.

Phi Beta Kappa. Membership: 185,000 in 184 chapters and 63 associations. President, H. Bentley Glass; secretary, Carl Billman. Headquarters: 1811 Q St. NW, Washington, D. C. 20009.

Planned Parenthood-World Population (Planned Parenthood Federation of America, Inc.). Membership: 147 affiliates. Annual meeting: Nov. 1968. President, Alan F. Guttmacher, M. D.; secretary, Mrs. Charles F. Whitten. Headquarters: 515 Madison Ave., New York, N. Y. 10022.

Rotary International. Membership: 625,000 in 13,000 clubs functioning in 137 countries. International convention: Mexico City, Mexico, May 12–16, 1968. President, Luther H. Hodges; general secretary, George R. Means. Headquarters: 1600 Ridge Ave., Evanston, Ill. 60201.

Special Libraries Association. Membership: 6,900. National conference: Los Angeles, Calif., June 2–7, 1968. President, Mrs. Elizabeth R. Usher; exec. director, George H. Ginader. Headquarters: 235 Park Ave. So., New York, N. Y.

Travelers Aid Association of America (formerly National Travelers Aid Association). Membership: 87 local societies. President, Paul L. Mullaney; general director, Paul W. Guyler. Headquarters: 44 East 23rd St., New York, N. Y.

United Community Funds and Councils of America, Inc. Membership: local United Funds, Community Chests, and Community Health and Welfare Councils in 1,347 North American communities. President, Joseph A. Beirne; secretary, E. Robert Schellhase. Headquarters: 345 East 46th St., New York, N. Y. 10017.

United States Jaycees, The. Membership: 300,000 in 6,000 affiliated groups. Annual meeting: Phoenix, Ariz., June 18–20, 1968. President, James B. Antell; exec. vice president, Bob Cronk. Headquarters: Box 7, Tulsa, Okla. 74102.

Veterans of Foreign Wars of the United States. Membership, V. F. W. and Auxiliary: 1,775,000. National convention: New Orleans, La., Aug. 18–25, 1967. Commander-in-Chief, Joseph A. Scerra; Adjutant General, Julian Dickenson. Headquarters: V. F. W. Building, Broadway at 34th St., Kansas City, Mo. 64111.

World Council of Churches (United States Conference). Membership: 28 churches or denominations in U. S. Annual meeting: Buck Hill Falls, Pa., April 24–26, 1968. Chairman, Charles C. Parlin; exec. secretary, Eugene L. Smith. Headquarters: 475 Riverside Dr., New York, N. Y. 10027.

Young Women's Christian Association of the U. S. A. Membership: over 2,000,000. President, Mrs. Robert W. Claytor; executive director, Edith M. Lerrigo. Headquarters: 600 Lexington Ave., New York, N. Y. 10022.

Zionist Organization of America. Membership: 100,000 in 600 districts. National convention: Jerusalem, Israel, July 19–26, 1967. President, Jacques Torczyner; national secretary and exec. director, Leon Ilutovich. Headquarters: 145 East 32d St., New York, N. Y. 10016.

R. M. C.

SOCIOLOGY

A number of trends indicative of change and growth were apparent in sociology in 1967.

Trends. A leading trend in sociology during recent years has been the proliferation of small-scale and limited-area research projects. This, and a related trend toward better research techniques, with the computer playing an increasingly prominent role, were apparent in sociological studies undertaken in the United States during 1967.

A third tendency, toward coordinated research projects, brought sociologists from related social sciences together into research teams to attack a single problem from several different angles. Increasing numbers of sociologists were lured away (by higher salaries) from academic posts to collect social data for government agencies, private foundations, or industrial corporations.

Also apparent was a trend that was taking established sociologists in the academic world away from full-time teaching at the undergraduate level to spend more time directing research by a few selected graduate students.

Comparative Sociology. There is an incipient but growing interest in comparative sociology, involving studies "across cultures, nations, and societies." A discussion of this emerging field by John Useem (Michigan State University) and Allen D. Grimshaw (Indiana University) appeared in *Items*, a publication of the Social Science Research Council. The article outlined certain immediate aims of comparative sociology—first to "generate concepts, categories, indications, and propositions" useful in "future trans-social studies," second, to develop "generalizations which may ideally approximate universal validity;" and third, to "measure sociological concepts" based on local and regional studies against data drawn from more comprehensive, or even world-wide studies.

American Sociological Association. The 62d annual meeting of the American Sociological Association (ASA) was held in San Francisco on Aug. 28 to 31, 1967. The presidential address by Charles P. Loomis of Michigan State University was titled "In Praise of Conflict and Its Negation." At a session devoted to macrosociology, papers were presented on "The Comparative and Evolutionary Study of Macro-Institutions" (Talcott Parsons, Harvard), "Macrosociology as a Methodological Challenge" (Paul F. Lazarsfeld, Columbia), and "A Key to Macrosociology" (Amatai Etzionai, Columbia).

The American Catholic Sociological Society, the Rural Sociological Association, and the Society for the Study of Social Problems held meetings in San Francisco in conjunction with the meeting of the ASA. The 63rd annual meeting of the ASA was scheduled to be held in Boston in August 1968, with Philip M. Hauser, University of Chicago, serving as president. The central theme will be "On the Gap Between Sociology and Social Policy."

Raymond W. Mack of Northwestern University, visiting scholar with the Russell Sage Foundation, became editor of *The American Sociologist* in 1968. He succeeded Talcott Parsons, who was named president of the American Academy of Arts and Sciences.

EMORY S. BOGARDUS
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SOFTBALL. See SPORTS.

SOMALIA

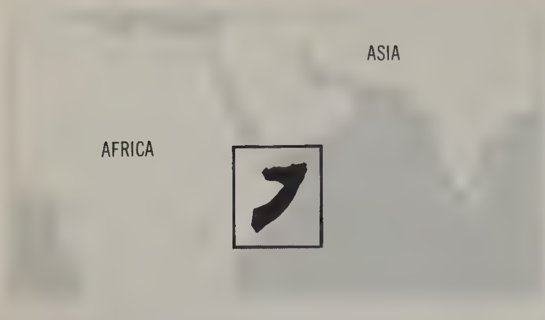
Somalia (the Somali Republic) remained one of the most stable democratic states in Africa in 1967. A new government took office during the summer, and significant strides were made toward settling differences with the neighboring nations of Ethiopia and Kenya.

Government. On June 10, the National Assembly—by a vote of 73 to 50—elected Abdirashid Ali Shermarke (prime minister in 1960–64) to a 6-year term as president. He replaced Aden Abdulla Osman, who had served as president since July 1, 1960.

Mohammed Haji Ibrahim Egal, a former defense minister, was chosen by Shermarke as prime minister on July 6. Egal and his cabinet were approved on August 13 by a National Assembly vote of 119 to 2, the largest majority ever given to a new Somali government. (In an interesting sidelight to the elections, the ranks of the ruling Somali Youth League were swelled by a large number of defectors from the opposition Somali National Congress.)

As Shermarke is from the south (formerly Italian Somaliland) and Egal from the north (formerly British Somaliland), the new government is viewed as an effective fusing of the two former colonial

SOMALIA • Information Highlights



Area: 246,201 square miles (637,660 sq km).
Population: 2,580,000 (mid-1966 est.).
Chief City (1966 est.): Mogadishu, the capital, 170,000.
Government: *President*—Abdirashid Ali Shermarke (elected June 10, 1967); *Prime Minister*—Mohammed Haji Ibrahim Egal (took office Aug. 13, 1967). *Parliament*—National Assembly, 123 members (party seating, 1965: Somali Youth League, 90; Somali National Congress, 15; others, 18).
Religious Faiths: Sunni Muslims, 99% of population.
Education: *Literacy rate,* 10% of population. *Total school enrollment* (1964)—28,207 (primary, 20,698; secondary, 4,745; teacher-training, 359; technical, 2,344; higher, 61).
Finance (1967 est.): *Revenues,* $37,300,000; *expenditures,* $37,300,000; *monetary unit,* Somali shilling (7.143 shillings equal U. S.$1).
Gross National Product (1965 est.): $105,000,000.
Cost of Living Index (1966): 155 (1958=100).
Manufacturing (metric tons, 1965): Sugar, 19,000.
Chief Crop (metric tons, 1965–66 crop year): Bananas, 157,000.
Chief Mineral (metric tons, 1965): Salt, 5,442.
Foreign Trade (1965): *Exports,* $33,400,000; *imports,* $49,500,000 (chief imports: nonelectrical machinery, $6,553,000; rice, $4,171,000; textile yarn and fabrics, $3,785,000). *Chief trading partners:* Italy (took 49% of exports, supplied 29% of imports); Aden (took 40% of exports, supplied 5% of imports); USSR (supplied 8% of imports).
Transportation: *Roads* (1964), 8,004 miles (12,881 km); *motor vehicles* (1965), 11,300 (automobiles, 5,000); *merchant vessels* (1966), 1 (7,000 gross registered tons); *principal airport,* Mogadishu.
Communications: *Telephones* (1967 est.): 4,200; *radios* (1965), 35,000; *newspapers* (1964), 2 (daily circulation, 5,000).

regions. The shift in administration, however, did not signify a change in basic policies.

Foreign Relations. The long-festering tensions between Somalia and Ethiopia over self-determination for the Somali people in the Ogaden region of Ethiopia continued through part of 1967. However, in September, during the Kinshasa meeting of the Organization of African Unity, Somalia took the initiative in bringing about a détente. Agreement was reached on such matters as withdrawal of military forces from the immediate vicinity of the boundary and the cessation of hostile propaganda.

Somalia and Kenya agreed to take measures to reduce the conflict along their common border. Agreements were reached at the Arusha (Tanzania) Conference of the East African Economic Community Organization (EAECO) in October, at which time Somalia indicated its desire to join the grouping.

Relations with France, however, deteriorated with Somalia's criticism of French deportation and disfranchisement of Somalis in French Somaliland in order, Somalia claimed, to influence results of a referendum on independence; Somalia also disapproved of a new French statute on the governing of French Somaliland—changing its name to "French Territory of the Afar and the Issa."

Economy. The closing of the Suez Canal in June had a profound effect on the Somali economy, which is dependent on exports of bananas to Italy. The gap was taken up by increased Italian financial assistance.

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SOUTH AFRICA

Foreign relations were the dominant consideration in South Africa in 1967. While much of the world remained critical of the apartheid government of Prime Minister Balthazar J. Vorster, some nearer neighbors ignored the issue. Political considerations were forgotten in the acclaim that followed the world's first human heart transplant, achieved by a Cape Town surgeon in December.

Relations in Southern Africa. In January, Prime Minister Vorster and visiting Prime Minister Leabua Jonathan of Lesotho agreed "that differences in political philosophy are no bar to fruitful cooperation." Subsequently, South Africa's foreign minister announced that further contact between the republic and independent African states could be expected. In March a trade agreement was signed with Malawi, at which time the South African minister of economic affairs offered the advice, guidance, and technical assistance of the republic to any African state, irrespective of its political or domestic policies. Malawi and South Africa later agreed to establish formal diplomatic relations. In October, it was announced that South Africa had granted $70,000 toward enlarging Lesotho's police force.

In August it was reported that units of the South African police and army had joined Rhodesian forces operating against African guerrillas in that country. Britain, which claims sovereignty over Rhodesia, protested to South Africa.

South Africa and the United Nations. South Africa's relations with the United Nations deteriorated in 1967. On January 1, Prime Minister Vorster raised the possibility of the republic's withdrawing from the world body. On May 19 the UN General Assembly, which had declared an end to South Africa's administration of South West Africa in 1966, voted to establish an 11-member council to administer the territory and prepare it for independence in June 1968. Vorster replied that South Africa would not recognize this council, and on June 1, 1967, he announced that South Africa would cease paying its pro rata share of the expenses incurred by the UN for activities that "fell outside the scope of the purpose for which the organization had been established."

As expected, South Africa declined to apply economic sanctions to Rhodesia, as voted by the UN Security Council in December 1966. Apparently fearing that economic sanctions might be extended to South Africa itself, a cabinet minister asserted that the country could withstand sanctions for at least three years. It was also reported that the government had exerted pressure on the industrial sector to stockpile certain categories of strategic materials and had moved ahead with plans to set up its own oil industry. In November, Vorster asserted his "earnest wish" that the Rhodesian issue not lead to a confrontation between South Africa and the United Nations.

International Athletics. The traditional ban on racially mixed sport has resulted in South Africa's increasing isolation from international athletics. The republic was not permitted to participate in the 1964 Olympic Games. In April 1967, Prime Minister Vorster announced that so long as "people do not make political capital out of the matter," South African teams henceforth would be permitted to compete with visiting teams from nonwhite countries or teams including nonwhite members. Earlier it had

FIRST HEART TRANSPLANT on a human being was performed in Cape Town, December 3, by a team of doctors, nurses, and technicians under the leadership of Dr. Christiaan Barnard (*2d row, 4th from left*). The recipient, a 55-year-old man, died 18 days after the operation, although his new heart was still functioning.

UPI

been announced that South African teams sent to international meetings might include sportsmen of all racial groups. Within the country, however, sport continues to be segregated.

U. S. Carrier Incident. In February 1967 the U. S. carrier *Franklin D. Roosevelt* made an operational call at Cape Town. Despite elaborate preparations for an entertainment program for the crew made jointly by the U. S. Navy and South African officials, shore leave was canceled at the last minute. The U. S. Defense Department explained that its policy permitted the ship's personnel to participate only in racially integrated activities while ashore. South African officials and press reacted angrily to what they considered an affront. Shortly thereafter a spokesman in Washington stated that U. S. warships were not likely "in the foreseeable future" to require the use of South African port facilities.

Apartheid. In an elaboration of official "Bantustan" policy, the minister of Bantu administration and development said in May that the progressive development of the African reserves as "Bantustans," or "national homelands," would in time result in Africans having the status of aliens in "white South Africa." Like Africans from Lesotho and Botswana, indigenous Africans will be required to have passports from their "national authorities" to be in the "white areas," and future arrangements between these national authorities and the central government will be based on "international agreements." The government then presented its $868 million second 5-year plan for the "Bantu areas" exclusive of the Transkei, which has its own plan.

On March 21 plans were announced for granting internal self-government to the Ovamboland territory in South West Africa. While the Ovambo chiefs reportedly were enthusiastic, African leaders at the UN decried this as an illegal extension of the Bantustan policy.

Press Laws. In August, Prime Minister Vorster announced that the government was preparing legislation to give it authority to compel newspapers to reveal the names of their informants if asked to do so. Earlier, charges were brought against five persons who were alleged to have published false reports of conditions in South African prisons.

SOUTH AFRICA • Information Highlights

ASIA
AFRICA
SOUTH WEST AFRICA
SOUTH AFRICA

Area: 471,445 square miles (1,221,034 sq km).
Population: 18,298,000 (July 1, 1966 est.).
Chief Cities (1960 census): Pretoria, the capital, 303,684; Cape Town, 508,341; Johannesburg, 595,083; Durban, 560,0T0.
Government: *Acting President*—Jozua F. Naude (took office May 31, 1967); *Prime Minister*—Balthazar J. Vorster (took office Sept. 13, 1966). *Parliament*—Senate, 54 members; (party seating, 1967: National party, 41; United party, 13); House of Assembly, 166 members (seating, 1967: National party, 126; United party, 39; Progressive party, 1).
Religious Faiths: Protestants, 66% of population; Roman Catholics, 6%; others, 28%.
Education: *Literacy rate* (1960), 32% of Bantu population. *Total school enrollment* (1960)—2,758,796 (primary, 2,266,556; secondary, 365,886; teacher-training, 13,624; technical, 60,782; higher, 51,948).
Finance (1967–68 budget est.): *Revenues*, $2,013,000,000; *expenditures*, $1,942,000,000; *public debt*, $5,278,000,000; *monetary unit*, rand (0.7143 rand equal U. S.$1).
Gross National Product (1966): $11,956,000,000.
National Income (1966): $10,287,200,000; average annual income per person, $562.
Economic Indexes (1966): *Manufacturing production*, 185 (1958 =100); *mining production*, 162 (1958=100); *cost of living*, 118 (1958=100).
Manufacturing (metric tons, 1966): Cement, 3,984,000; crude steel, 3,288,000; sugar, 1,635,000; gasoline (1965), 1,325,000; wheat flour, 625,200; meat (1962), 574,000.
Crops (metric tons, 1966): Maize, 8,242,000 (ranks 4th among world producers); wheat, 556,000; citrus fruit (1965), 551,000; grapes (1964), 419,000; potatoes (1964), 405,000.
Minerals (metric tons, 1965): Gold, 30,553,874 troy ounces (ranks 1st among world producers); manganese, 1,567,446 (world rank, 2d); chromite, 942,105 (world rank, 2d); diamonds, 5,026,000 carats (world rank, 2d); asbestos, 218,405 (world rank, 3d); uranium oxide, 2,669 (world rank, 3d); coal (1966), 47,940,000; limestone (1964), 6,971,000.
Foreign Trade (1966): *Exports*, $1,664,000,000 (chief exports: diamonds, $221,060,000; wool, $168,560,000); *imports*, $2,304,000,000 (chief imports, 1965: transport equipment, $367,900,000; textile yarn and fabrics, $199,300,000; electrical machinery, $163,000,000). *Chief trading partners* (1965): Britain (took 34% of exports, supplied 29% of imports): U. S. (9% and 19%).
Transportation: *Roads* (1964), 206,000 miles (332,000 km); *motor vehicles* (1965), 1,441,000 (automobiles, 1,126,000); *railways* (1965), 13,621 miles (21,916 km); *merchant vessels* (1966), 48 (296,000 gross registered tons); *national airline*, South African Airways.
Communications: *Telephones* (1967): 1,260,692; *radios* (1965), 2,600,000; *newspapers* (1961), 21.

WIDE WORLD

BALTHAZAR JOHANNES VORSTER, prime minister of South Africa and leader of its Nationalist party since Sept. 13, 1966, continued in 1967 the apartheid policies of his predecessor, Hendrik F. Verwoerd, who had been assassinated. Although there was some indication of a more liberal and pragmatic government policy during his early months in office, Vorster moved against persons suspected of antigovernment activities, and he rejected all efforts by the United Nations to end South Africa's mandate and jurisdiction over the territory of South West Africa.

Vorster was born in Jamestown, Cape province, on Dec. 13, 1915. He entered law practice in Port Elizabeth in 1929. During World War II he was imprisoned as a leader of the militantly anti-British Ossewa Brandwag. He was elected to the South African Parliament in 1953, and served as minister of justice from 1961 until becoming Nationalist party leader (and automatically prime minister) in 1966. In 1941 Vorster married the former Martini Malan; they have a daughter and two sons.

Defense. Early in 1967 the government announced legislation to lengthen the period of compulsory military service and to extend such service to all white males upon their reaching the age of 18. Heretofore, about 80% of such persons had been called up for military service under a complicated ballot system. A program was under way to "equip" soldiers "mentally and spiritually" to meet the "dangers of the present-day world, such as communism."

Economy. In January 1967 the *Financial Times* noted the "extraordinary resilience" of the South African economy in 1966 following a leveling off in mid-1965 after four years of boom conditions. The 1967–68 budget was presented in March with the statement that the government was "absolutely resolved to curb inflation." New tax measures were proposed, and a budget surplus of $71 million was forecast. Analysts predicted that if inflation was not checked, the gold-mining industry, which sells its product for a fixed price, would be seriously affected.

South African import and export figures for January–July 1967 showed large increases compared with figures for the corresponding period in 1966. In the first half of 1967, South Africa went from fourth to second among Britain's export markets. Dramatic increases were also recorded in South African trade with France, Japan, Mozambique, and Rhodesia. South Africa also was exploring the possibilities of greater trade with Latin America.

The third economic development program (1966–71), published in 1967, projects a target annual growth rate of 5.5%, anticipating an annual rise in productivity of 2.9%. The program assumes a yearly inflow of 20,000 white immigrants, but, as this number is insufficient to meet the projected need for skilled laborers, greater use of nonwhite skilled labor will be required.

The Presidency. In February members of Parliament sitting as an electoral college elected former Finance Minister Theophilus E. Donges to succeed President Charles Swart on May 31. Before he was sworn in, however, Donges was taken ill, and at the end of May, Jozua F. Naude, president of the Senate, was sworn in as acting state president. Donges died on Jan. 10, 1968.

Death of Luthuli. Former Chief Albert Luthuli, 69, onetime president-general of the banned African National Congress and winner of the Nobel Peace Prize for 1960, was killed in a railway accident on July 21, 1967.

Heart Transplant. On December 3 a South African surgeon, Dr. Christiaan N. Barnard, made medical history at Groote Schuur Hospital in Cape Town. He successfully replaced the damaged heart of 53-year-old Louis Washkansky with the heart of a 25-year-old woman, who had died of brain injuries suffered in an automobile accident. Washkansky survived 18 days before succumbing to pneumonia on December 21. A second heart transplant was performed by Dr. Barnard, Jan. 2, 1968, on Dr. Philip Blaiberg, 58, a retired dentist.

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SOUTH ARABIAN FEDERATION. See COMMONWEALTH OF NATIONS.

SOUTH CAROLINA

South Carolina enjoyed a progressive year, highlighted by the leadership of newly elected Democratic Gov. Robert E. McNair. Although the rate of

SOUTH CAROLINA • Information Highlights

Area: 31,055 square miles (80,433 sq km).

Population: 2,603,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Columbia, the capital, 100,000; Charleston, 79,500; Greenville, 67,000; Spartanburg, 47,000; Anderson, 41,000; Rock Hill, 31,800.

Government: *Chief Officers*—governor, Robert E. McNair (Democrat); lt. gov., John C. West (D); secy. of state, O. Frank Thornton (D); atty. gen., Daniel R. McLeod (D); treas., Grady L. Patterson, Jr.; supt. of educ., Cyril B. Busbee; chief justice, Joseph R. Moss. *Legislature*—General Assembly (convened Jan. 10, 1967): Senate, 50 members (6 Republicans, 43 Democrats, 1 other; House of Representatives, 124 members (17 R, 107 D).

Education: *School enrollment* (1965–66)—public elementary, 404,700 pupils (13,044 teachers); public secondary, 254,600 pupils (9,816 teachers); nonpublic, 17,100 pupils (890 teachers); college and university, 43,946 students. *Public school expenditures* (1965–66)—$206,500,000 ($350 per pupil); average teacher's salary, $4,675.

Public Finance (fiscal year 1966–67): *Revenues*, $772,409,300 (3% sales tax, $128,668,200; motor fuel tax, $80,527,038; federal funds, $142,355,278). *Expenditures*, $737,563,572 (education, $212,418,309; health, welfare, and safety, $81,132,000; highways, $125,385,456). *State debt*, $172,293,500 (June 30, 1967).

Personal Income (1966): $5,310,000,000; average annual income per person, $2,052.

Public Assistance (fiscal year 1966–67): $30,660,938 to 71,428 cases (aged, $16,343,140; dependent children, $4,963,387).

Labor Force (employed persons, August 1967): *Agricultural*, 107,800; *nonagricultural* (wage and salary earners), 744,800 (42.9% manufacturing, 16.4% trade, 16.1% government). *Unemployed persons* (August 1967)—53,500.

Manufacturing (1965): Value added by manufacture, $2,737,735,000 (nonelectrical machinery, $100,918,000; electrical machinery, $75,375,000; fabricated metals, $39,747,000; food and products, $108,180,000).

Agriculture (1966): *Cash farm income* $449,567,000 (livestock, $137,794,000; crops, $258,776,000; govt. payments, $52,997,000). *Chief crops* (tons)—peaches, 158,400 (ranks 2d among the states); tobacco, 63,650 (rank, 4th); soy beans, 541,460; corn for grain, 406,200; hay, 373,000.

Mining (1966): *Production value*, $45,593,000. *Chief minerals* (tons)—stone, 8,129,000; sand and gravel, 6,016,000.

Fisheries (1966): *Commercial catch*, 23,191,295 pounds ($4,199,260). *Leading species*—hard blue crabs, 5,724,458 pounds ($283,860); shrimp, 4,263,000 pounds ($2,180,590); mullet, 3,258,212 pounds ($193,661); alewives, 2,817,000 pounds ($56,340).

Transportation (1967): *Roads*, 34,174 miles (54,986 km); *motor vehicles*, 1,132,846; *railroads*, 3,280 line miles (5,278 km); *airports with scheduled services*, 6.

Communications (1967): *Telephones*, 864,700; *television stations*, 11; *radio stations*, 88; *newspapers*, 17 (daily circulation, Sept. 1966, 544,722).

economic growth slowed, the state made real progress in various areas and took steps to face many of its problems.

General Legislation. Under the guidance of Governor McNair, the 1967 General Assembly enacted numerous laws having significance for the future of the state. One of these established a computerized system of voter registration, centrally controlled, which has simplified the periodic (10-year) registration. Another law created a department of parks, recreation, and tourism. Other new laws provided for a water resources planning committee; a revenue bond act for financing industry; new forms of county government for some areas; traffic safety, including driver reexamination and vehicle inspection; a new system for controlling the use of alcoholic liquors; and increased financial support for teachers, state employees, and municipal government.

The commission to study the needs for state consitutional revision was reorganized. A permanent reapportionment plan for the state Senate (with the number of members reduced from 50 to 46) was approved and later upheld by a federal court.

Education. Significant gains were made in education. The legislature enacted laws providing for compulsory school attendance and a commission to oversee and plan for the needs of higher education. The state department of education was reorganized. Pilot kindergarten programs were established and special facilities expanded. The number of Negroes attending previously all-white schools doubled.

With federal aid, the state began a new type of program, called T^2 ("Training for Tomorrow"), to train the underprivileged and the unskilled. New technical schools and additional graduate curriculums were added, and improvements were made at the Medical College of South Carolina, at Charleston.

The Economy. The economy remained generally strong despite a slump in textiles, the major industry. Without a tax increase, the state ended the year with a surplus of more than $21 million. Many workers, after completing retraining programs, were added to the labor force. Textile workers received a pay increase. The number of new industries was not as great as in previous years, but the additions represented some of the nation's leading firms.

Yields in most crops were excellent, although a late frost destroyed substantial parts of the valuable peach crop. Strong gains were made in turkey production and food processing. The General Assembly continued price regulations for milk and established a committee to evaluate agricultural management, especially marketing.

Social and Cultural Progress. There were no major occurrences of racial strife during the year. Negroes were placed on some of the leading state boards, and a statewide biracial panel was organized to study the racial situation and promote harmony.

The state created a fine arts commission, started a new state library building, and planned for the tercentennial celebration in 1970.

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SOUTH DAKOTA

Political events in South Dakota in 1967 revolved around the annual session of the legislature. Economic conditions in the state remained good.

Political Affairs. On Jan. 3, 1967, Gov. Nils Boe began his second 2-year term of office. The 42d South Dakota legislature—the first to meet since rural representation was reduced by reapportionment—convened January 17. By the time the legislature adjourned on March 11, legislation had been passed providing for mandatory vehicle inspection, a 7-member state building authority, the taxing of profit-making educational institutions, and a uniform assessment date for personal property taxes. Other measures included a retirement program for state employees and a 12-year independent school district law, to be implemented by July 1, 1970. One of the proposals voted down called for a lowering of the voting age to 19 years.

The legislature also passed a law exempting the state from the federally sponsored daylight saving time, or "fast time." However, signatures later secured throughout the state assured a referendum on the issue at the next general election in 1968; meanwhile, the state went on fast time from April through October.

Total expenditures of $61,600,000 were authorized from the general fund, with the largest item (24,600,000) for higher education.

Other political events included the announcement by state Rep. Robert J. Schumacher on December 27 that he would oppose veteran 2d District Congressman E. Y. Berry in the Republican primary in June 1968, and Richard Nixon's announcement on December 19, of his intentions to enter the state's presidential primary.

SOUTH DAKOTA • Information Highlights

Area: 77,047 square miles (199,552 sq km).

Population: 674,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Pierre, the capital, 11,200; Sioux Falls, 70,500; Rapid City, 49,000; Aberdeen, 24,500; Huron, 14,800; Watertown, 14,300; Mitchell, 12,700; Brookings, 11,600.

Government: *Chief Officers*—governor, Nils A. Boe (Republican); lt. gov., Lem Overpeck (R); secy. of state, Alma Larson (R); atty. gen., Frank Farrar (R); treas., Al Hamre; supt. of pub. instr., Gordon Diedtrich; presiding judge, Fred J. Homeyer. *Legislature*—(convened Jan. 17, 1967): Senate, 35 members (29 Republicans, 6 Democrats); House of Representatives, 75 members (64 R, 11 D).

Education: *School enrollment* (1965–66)—public elementary, 120,000 pupils (6,400 teachers); public secondary, 60,000 pupils (2,245 teachers); nonpublic schools, 26,500 pupils (1,100 teachers); college and university (fall 1965), 23,253 students. *Public school expenditures* (1965–66)—$76,500,000 ($466 per pupil); average teacher's salary, $4,625.

Public Finance (fiscal year 1965–66): *Revenues,* $185,278,000 (3% sales tax, $26,686,618; motor fuel tax, $23,899,505; (education, $58,062,000; health, welfare, and safety, $26,095,000; highways, $66,232,000).

Personal Income (1966): $1,643,000,000; average annual income per person, $2,420.

Public Assistance (fiscal year 1964): $14,882,000 to 19,301 recipients (aged, $5,966,00; dependent children, $3,996,000).

Labor Force (employed persons, Aug. 12, 1967): *Agricultural,* 76,900; *nonagricultural* (wage and salary earners), 158,950 (9.2% manufacturing, 26.5% trade, 27.9% government). *Unemployed persons* (Aug. 12, 1967)—7,200.

Manufacturing (1965): Value added by manufacture, $157,449,000 (meat products, $59,131,000; dairy products, $20,115,000; printing and publishing, $13,380,000; newspapers, $9,899,000; lumber and wood products, $3,742,000).

Agriculture (1966): *Cash farm income,* $880,133,000 (livestock, $692.199,000; crops, $187,934,000; govt. payments, $77,655,000). *Chief crops* (tons)—oats, 1,208,100 (ranks 5th among the states); flaxseed, 150,400 (rank, 2d); rye, 120,700 (rank, 2d); hay, 4,574,000; corn for grain, 3,177,300; wheat, 1,178,900; sorghum grain, 338,200.

Mining (1966): *Production value,* $52,707,000. *Chief minerals* (tons)—sand and gravel, 13,630,000; stone, 2,186,000; clays, 231,000; feldspar, 83,950; uranium ore, 47,400; gypsum, 17,000; gold, 606,467 troy ounces.

Fisheries (1965): *Commercial catch,* 3,446,000 pounds ($233,000).

Transportation: *Roads* (Dec. 1966), 83,864 miles (134,937 km); *motor vehicles* (1967), 423,808; *railroads* (1966), 4,440 track miles (7,145 km); *airports with scheduled services* (1967), 9.

Communications (1967): *Telephones,* 285,100; *television stations,* 10; *radio stations,* 29; *newspapers,* 12 (daily circulation, 165,233).

Economic Affairs. According to a report in January the Sioux Falls stockyards led the nation in the number of salable sheep and were the eighth-largest market in salable livestock. A month-long milk-holding action, sponsored by the National Farmers Organization, started in Turner county on March 18.

Educational Affairs. The year 1967 marked the resignation of Dr. Laurence S. Flaum as president of General Beadle State College, and the death, on January 20, of Merrill F. Coddington, state superintendent of public instruction.

Plans moved ahead for future construction of a major classroom building at South Dakota State University.

Travel Developments. A State Tourist Advisory Council was established at Pierre on November 1. November 16 marked the official opening of Interstate Highway 90. A $3,400,000 bond issue for an airport terminal was approved by Sioux Falls voters on November 28.

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SOUTH WEST AFRICA. See SOUTH AFRICA; UNITED NATIONS.

SOUTHEAST ASIAN TREATY ORGANIZATION. See ASIA.

SOVIET LITERATURE

Literary life in the Soviet Union in 1967 was dominated by the 50th anniversary of the Russian Revolution. Among more than 1,400 books published for the celebration were many volumes of "Leniniana," including a 55-volume edition of Lenin's works.

Although many books were written about the events of 1917 and the following decade, the scholarly value of such works was questionable, for they often sacrificed historical accuracy to party doctrine. Thus, the "heretics" or victims of Soviet history, from Trotsky to Kamenev, were either totally ignored or portrayed, as in Vsevolod Kochetov's *The Angle of Incidence,* as dangerous villains.

In honor of the anniversary year, the title "Hero of Soviet Labor" was awarded to several writers: three Russians, Mikhail Sholokhov, Konstantin Fedin, and Leonid Leonov; two Ukrainians, Aleksandr Korneichuk and Pavel Tychina; one Tadjik, Tursun Zadé; and one Latvian, Andrei Upita.

Party Controls. The doctrinary wing of the Communist party used the occasion of the 50th anniversary to tighten controls over literature and the arts. When the twice-postponed Congress of Soviet Writers, the first since 1959, met on May 23–27, it presented a picture of total conformity. Behind the scenes, however, some prominent writers boycotted the conference, and Aleksandr Solzhenitsyn, author of *One Day in the life of Ivan Denisovich,* addressed an angry letter to the Congress—later reprinted in the West—protesting Soviet censorship. Soviet authorities retaliated by prohibiting publication of Solzhenitsyn's new novel, *The Cancer Ward.*

Restrictive measures were taken against many authors during the year. Compulsory changes were made in the editorial board of the liberal *Novy Mir* monthly and there were new arrests of writers, including Aleksandr Ginzburg, a poet who assembled materials on the Sinyavsky-Daniel trial of 1966. Another writer, Vladimir I. Bukovsky, was tried for participating in a street demonstration. Despite warnings by the Soviet secret police, records of the closed-door Bukovsky trial were submitted to the West by Pavel M. Litvinov, grandson of a former pro-Western foreign minister, Maxim Litvinov.

The popular poet Andrei Voznesensky locked horns temporarily with the heads of the Soviet Writers Union when the union, displeased with his friendly attitude toward the United States during a previous tour, forced him to cancel a poetry recital at Lincoln Center, New York City, scheduled for June 21. Voznesensky wrote a bitter letter of protest, was denounced by the union, but later was apparently reconciled to the literary establishment.

Fiction. The central literary event of 1967 was the serialization in *Moskva* magazine of Mikhail Bulgakov's *Master and Margarita,* a fantasy of the Devil's visit to Moscow. The work contains a profound interpretation of Christianity. Also outstanding was Valentin Katayev's *The Grass of Oblivion,* a brilliant survey of the first years following the Revolution. Another interesting work dealing with the same period was Sergei Zalygin's *The Salted Dale.*

Only a few other writings escaped the monotony of the year's production. *During the Testing,* by Irina Grekova, depicts with humor and psychological acuity the lives of scientists and army experts assigned to test weapons in a forlorn village in central Asia. Abu Bakara, in his witty *A Necklace for My Serminaz,* tells of the exotic customs of a small Caucasian tribe of warriors and goldsmiths. Also worthy in a humorous vein are *The Village Detective,* by Wil Lipatov; *On the Top of the Earth,* by Vladimir Sanin; *The Man with the Shriveled Arm,* by Fazil Iskander; and *The Difficult Job,* by Leonid Lench.

Outstanding short stories were the poet Yevgeny Yevtushenko's *Pearl Harbor,* Vladimir Voinovich's *Two Comrades,* and Varlam Shalamov's *Kolyma Tales.*

Poetry. Probably the most talked-about poem of the year was Voznesensky's *The Prologue to a Poem,* which fiercely denounced the Chinese and stressed the destiny of "eternal Russia to shield the West from Oriental hordes." Noteworthy poetic collections included *From a Notebook,* by Aleksandr Tvardovsky, and *The Earthly to the Earth,* by Arseny Tarkovsky.

Russian Publications Outside the USSR. Stalin's daughter, Svetlana Alliluyeva, who defected to the United States in 1967, published her *Twenty Letters to a Friend* (written in 1963), which made a sensation in the West and was vituperated in Moscow. Written in an honest and captivating style, these memoirs afford a vivid, if one-sided, picture of Stalin and the Stalinist era, and belong to a series of source documents on modern Russian history. (See also UNION OF SOVIET SOCIALIST REPUBLICS.)

Less important but also impressive émigré publications were *Journey into the Whirlwind,* by Evgenia Guinzburg, and *The Deserted House,* by Lydia Chukovskaya. Manuscripts that could not be printed in the Soviet Union continued to be smuggled out.

Obituaries. The year 1967 marked the deaths of 76-year-old Ilya Ehrenburg, a highly popular Soviet novelist and a journalist of international repute; the poet Sergei Gorodetsky; and the novelist Yuri Gherman.

MARC SLONIM
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SOVIET UNION. See UNION OF SOVIET SOCIALIST REPUBLICS.

SPACE EXPLORATION

World's mightiest rocket, Saturn V rises slowly past Florida's palms, November 9, in the first test flight of the vehicle that is to carry United States astronauts to the moon.

UPI PHOTO

SPACE EXPLORATION

Man's venture into space was interrupted by tragedies in 1967. Three U. S. astronauts died in a fire while testing their Apollo vehicle on its launch pad, and a Soviet cosmonaut was killed while returning from a space mission. Two other U. S. space pilots also were killed in 1967, in accidents unrelated to actual missions: Marine Maj. Clifton C. Williams, Jr., and the first Negro astronaut, Air Force Maj. Robert H. Lawrence, Jr.

The year nevertheless was one of great achievements in space. The United States concluded its very successful series of Lunar Orbiters, and both the United States and the USSR again managed to probe the environment of the planet Venus. The two countries also made advances in the development of more powerful launch vehicles.

The United States has designated the flight crews of the first three Apollo missions. As the time for a manned mission to the moon thus draws closer, the USSR and the United States are attempting with increased urgency to conclude a treaty covering the rescue and return of astronauts and vehicles in the event of emergencies or unintended landings.

MANNED SPACE FLIGHT

High hopes prevailed at the beginning of 1967 that the United States Apollo program would continue the unbroken series of successes that marked the Mercury and Gemini programs, and that the nation would achieve an early manned mission to the moon. The three-man Apollo craft seemed to need only a few tests to make it ready for the lunar flight. Announcement was made in January of the plans for the first manned Apollo mission; the craft was to be placed in an earth orbit about February 21, and would remain in orbit for up to two weeks.

Before that date arrived, however, the high expectations that had prevailed were shattered by a catastrophe that killed three astronauts in their spacecraft on the ground, and set back the entire U. S. manned space flight program.

U. S. Apollo Fire. On January 27 a routine check of performance of the Apollo 204 was being conducted on the launch pad at Cape Kennedy, with the command and service modules of the Apollo sitting atop the 218-foot (66.5-meter), two-stage Saturn IB launch vehicle. The crew of three selected for the coming February flight was aboard, sealed in their spacecraft. The astronauts were Virgil I. Grissom, Edward H. White II, and Roger B. Chaffee. Grissom had flown by himself in the Mercury *Liberty Bell* 7 on July 21, 1961, and with John Young in Gemini 3 on March 23, 1965. White was a veteran of the Gemini 4 flight with James A. McDivitt in June 1965, and was the first American to "walk" in free space. Chaffee was a rookie astronaut; the shot scheduled for February was to have been his first flight.

The routine of the test had been nearly completed; only 10 minutes remained before the end of the simulated countdown. Technicians watching the craft over closed-circuit television were the first to become aware that trouble had developed. At 6:31 P. M. (EST) one of the crew members reported from the Apollo, "Fire aboard the spacecraft." More urgent calls rapidly followed for a period of 18 seconds. Then there was a flash on the television screen and communications were lost. The outside of the Apollo heated rapidly and flames spurted out, followed by heavy smoke. Ground rescue crews were powerless to reach the craft; in the attempt, 27 workmen suffered from smoke inhalation. Five minutes passed before the ground crew was able to open the hatch of the spacecraft, to find the astronauts dead. They had died almost instantly from asphyxiation by the toxic fumes generated inside the cabin. The fire itself was later determined to have burned for only 25 seconds.

The bodies were removed at 1.55 A. M. and taken to the Cape Kennedy Air Force medical facility for autopsies. The men were buried with military honors —Grissom and Chaffee in the Arlington National Cemetary, and White in the cemetery at the U. S. Military Academy, West Point.

The National Aeronautics and Space Administration (NASA) immediately appointed a review board of experts under the chairmanship of Dr. Floyd L. Thomson, director of its Langley Research Center. The board employed 21 panels of 1,500 specialists to assist it. Every aspect of the tragedy and of possible contributing factors was examined minutely.

Causes of the Fire. It was quickly clear that three important elements had contributed to the disaster: the use of a pure oxygen atmosphere at above-atmospheric pressure; the presence of flammable materials in the cabin; and the slow-opening, manually operated escape hatch. In their successful flights the Mercury and Gemini spacecraft had contained pure oxygen, but at about 40% atmospheric pressure. The pressure in the Apollo in actual flight would have been equally low, but for testing purposes on January 27 the pressure had been increased. It was well known that such an atmosphere would intensify any fire that occurred. Success with the Mercury and Gemini flights, however, appeared to have diminished concern.

On April 9 the review board released its 3,000-page report. It stated that many evidences of faulty details of construction and of careless workmanship had been found, and it strongly criticized the many deficiencies in design and engineering, manufacture, and quality control. It also uncovered lax procedures on the launch pad.

The review board concluded that about 70 pounds (31.5 kg) of combustible materials distributed in the cockpit, combined with the oxygen atmosphere, led to the very rapid spread of an originally small fire. Tubing that carried the coolant fluid of water and glycol failed, permitting the fluid to contribute to the toxic fumes and the increase in pressure. The exact origin of the fire could not be identified, but it was surmised that a small electrical arc caused by faulty wiring probably was to blame.

Results of the Fire. The January 27 tragedy created concern for the safety of future Apollo crews. NASA reported that it was undertaking analysis and design studies of the craft with the objective of identifying needed changes. It further decided that the remaining craft of the fatal 204 type would not be used again for manned flight. This Block I craft was to be replaced by a Block II craft of later design.

The decision was made to continue with the use of a 100% oxygen atmosphere, but to employ only noncombustible and fire-resistant materials in the craft. All redesigning was done with the goal of preventing the possibility of an initial spark type of ignition of any size, of localizing any fire that started, of limiting the amount of material that could increase cabin pressure in a fire, and of choosing ma-

(*Right*) WIDOW of Virgil Grissom is consoled by President Johnson at funeral after Jan. 27, 1967, Apollo tragedy, in which Edward White and Roger Chaffee also died.

UPI

KOMAROV'S WIFE kisses picture of cosmonaut killed in April 1967 flight as his ashes are placed in Kremlin Wall.

ВЛАДИМИР МИХАЙЛОВИЧ
КОМАРОВ
1927-1967

TASS FROM SOVFOTO

terials that would not produce toxic fumes in a fire. A new and rapid-opening hatch was designed.

The changes required in the Apollo craft inevitably produced a delay in the program. A lunar landing before 1970 still remained possible, but was less probable than it had been before. The schedule of preliminary unmanned Apollo test flights was not expected to be affected; but, as the year went by, the unmanned flights also had to be pushed back.

Unmanned Apollo Tests. One unmanned test, designated as the Apollo 4 project, was made on November 9. The gigantic new Saturn 5 rocket, which has been developed for the mission to the moon, was given its first test in flight. In addition, it was used to test the re-entry into the atmosphere of the Apollo spacecraft along a path simulating a return from the moon. The revamped Block I type of Apollo command and service modules and a dummy lunar module, together with the Saturn third stage, were placed in an orbit of about 115 miles (185 km) altitude. After several tests the Apollo engine drove the command and service modules into the atmosphere from a height of 11,286 miles (18,170 km) at a speed of 36,000 miles (57,860 km) per hour. The command module separated to make the return to earth alone, 8½ hours after launch. It was protected by the new Block II heat shield as it fell northwest of Hawaii. The test was successful; if men had been aboard they would have returned safely. As the year ended, success again appeared to be within reach of the Apollo program. (See also below, ADVANCES IN SPACE TECHNOLOGY.)

Soviet Space Tragedy. The last previous manned Soviet flight had taken place in March 1965, and no sign of new activity had been evident to the world since then. Statements indicating possible new activity, however, began to be made in the early months of 1967. Then, on April 23, a spaceship of a new type, called Soyuz (Union) 1, was placed in orbit. The sole cosmonaut aboard was Vladimir M. Komarov, who had previously entered space in the three-man Voskhod 1 on Oct. 12, 1964.

The announced aims of the flight were to test the new spaceship and its systems in the space environment, and to conduct experiments in space and life sciences. The early communiqués after the launch reported that two-way communication had been established and that the pilot was proceeding with the assigned flight program. The on-board systems operated normally. As he passed overhead, Komarov transmitted messages to the USSR, Vietnam, and Australia. At 22 hours 30 minutes of flight time, all was still reported to be normal.

Four days later, on April 27, the USSR belatedly announced a new and tragic first in space exploration—the loss of a man in the course of an actual mission. The official communiqué stated that in the more than 24-hour flight Komarov had completed his assigned program of testing and experimentation and spacecraft maneuvering, and had secured evaluation of the technical characteristics of the Soyuz. On returning to earth, the spacecraft achieved successful passage through the upper atmosphere and most of the lower. But at the altitude of 5 miles (8 km) the craft failed to slow for a soft landing. Apparently the shroud lines had become twisted during the opening of the main parachute. Komarov was killed by the impact of the landing, reportedly struggling until death in his effort to save his ship. He was given a hero's funeral in Moscow's Red Square, and his ashes were interred in the Kremlin wall.

At the funeral Matislav V. Keldysh, president of the USSR Academy of Sciences, told the gathered crowd that the Soyuz I had been given unmanned tests in flight previous to the fatal trip. Thus it was revealed that the USSR's manned space flight program actually had been proceeding steadily during the past two years. The test flights had been covered by the name "Cosmos," which has been given to practically all of the USSR automated or unmanned spacecraft. The tragedy of Komarov's death prevented further manned Soviet flights in 1967.

Other Soviet Activities. The USSR displayed in both the Paris Air Exhibition and Montreal's Expo 67 the Vostok that in 1962 carried Yuri Gagarin as the first man in space. Also shown were models of 12 automated spacecraft.

In October there was a flurry of activity with the Cosmos-type spacecraft that appeared involved, at least in part, with tests for manned flight. On October 27, Cosmos 186 was launched into a low-level orbit; on October 30, Cosmos 188 was launched into a similar orbit. That same day the two craft were maneuvered successfully to a rendezvous and joined together, or docked, by ground command. The maneuver was televised back to the ground. After being joined together for 3½ hours, the two craft were separated again by ground command.

The next day Cosmos 186—which apparently had been the active vehicle—was soft landed. Two days later, on November 2, the Cosmos 188 craft was brought down to earth. Thus two unmanned spacecraft under ground control had achieved the same maneuver carried out by a manned Gemini craft in 1966. There was speculation that Cosmos 186 was the same type of vehicle as the manned Soyuz I that had crash-landed on April 24.

EARTH SATELLITES AND SPACE PROBES

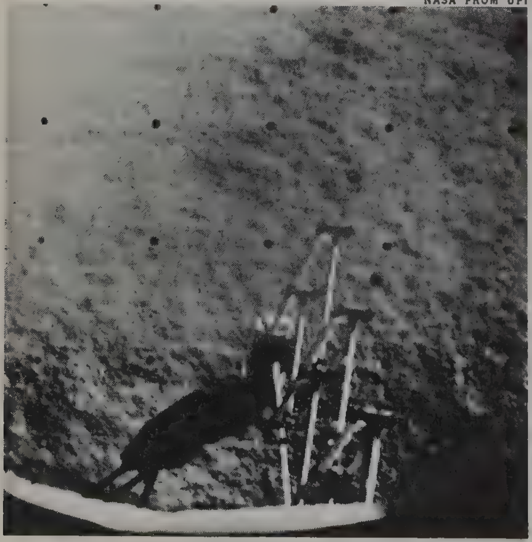
Undoubtedly the most spectacular area of satellite and space probe activity in 1967 was the photographic exploration of the entire moon, with a resolution that revealed details about one tenth the size of the smallest objects visible through telescopes on earth. Also of great interest were the efforts of the United States and the USSR to solve the riddle of the planet Venus, hidden beneath its clouds. Long-distance communication by means of satellites was further advanced. On April 26, Italy, with San Marco 2, became the fourth nation to launch an earth satellite; and Australia became the fifth on November 28 with the launching of WRESAT I (Weapons Research Establishment Satellite).

Lunar Orbiters. The United States sent three Lunar Orbiter space probes around the moon in 1967. Each probe carried a camera with a medium- and high-resolution lens system. From the low portion of the lunar orbit—about 50 miles (80 km) above the surface—the camera could take high-resolution pictures of possible sites for manned Apollo landings; the medium-resolution lens covered wider areas of the surface.

Lunar Orbiter 3, launched on February 4, entered a near-equatorial lunar orbit on February 8. Its mission was to photograph 12 equatorial areas as possible landing sites. The probe obtained good pictures until February 22; of the planned 212 frames (one medium- and one high-resolution picture each), 211 were actually photographed. Transmission of the pictures back to earth, although interrupted repeatedly by failures of the film to advance for scanning, continued until March 2, when the film stopped completely. The desired photographs had been obtained for six of the 12 landing areas. Lunar Orbiter 3 photographed 350,000 square miles (906,500 sq km) of the visible face of the moon and 900,000 square miles (2,331,000 sq km) of the hidden side. It also found the 30-foot (9-meter) shadow cast by the Surveyor I probe that had landed on the moon in 1966. With the assistance of the pictures from Lunar Orbiter 3, NASA selected 8 sites as those most likely to be safe for manned landings.

The next Lunar Orbiter, launched on May 4, entered a polar orbit about the moon four days later to carry out a mapping mission. The probe had an orbit more nearly circular than those of its predecessors. The first picture returned to earth was one taken over the south polar region; the area was seen to be similar in character to the cratered low latitudes. On May 26 the photographic portion of the mission of Lunar Orbiter 4 was ended by the failure of a switch, but in combination with earlier probes it had raised pictorial coverage of the hidden portion of the lunar surface to 75%. In August a map of the hidden side of the moon was released by the United States, based on the pictures taken by the first four Lunar Orbiters and supplemented by some pictures from the Soviet Zond 3.

The last Lunar Orbiter of the series was launched on August 1 and entered a lunar polar orbit on Au-



SURVEYOR 3'S metal claw begins tests of the moon's surface on Apr. 20, 1967, digging trenches and picking up clods. Results indicate a surface safe for manned landing.

NASA FROM UPI

LUNAR MATERIAL is dumped on Surveyor 3's footpad by claw to provide good viewing conditions. Color calibration wheel at right was used in a color study of this material.

NASA FROM UPI

gust 5, with the assignment of photographing the remaining hidden portion of the surface. The craft then went on to photograph areas of scientific interest and possible landing sites. For this task it was placed in a new orbit, the highest point of which was 932 miles (1,500 km) above the surface. On August 8, Lunar Orbiter 5 also took a picture of the earth about five sixths full.

Early in October, Lunar Orbiters 2, 3, and 4 crashed on the moon by command from earth.

Surveyor Moon Probes. The U. S. Surveyor probes all had the common purpose of developing the technology of soft landing and of providing data about the lunar surface. In 1967 each Surveyor carried two beryllium mirrors on its legs, permitting the single camera aboard to look underneath the spacecraft. Light filters permitted pictures to be taken with ordinary sunlight, with polarized light, or in three monochromatic colors; the latter could be combined on earth to produce color photographs. Each Surveyor also had crushable footpads that gave clues to the strength of the lunar surface by the extent of their deformation after landing.

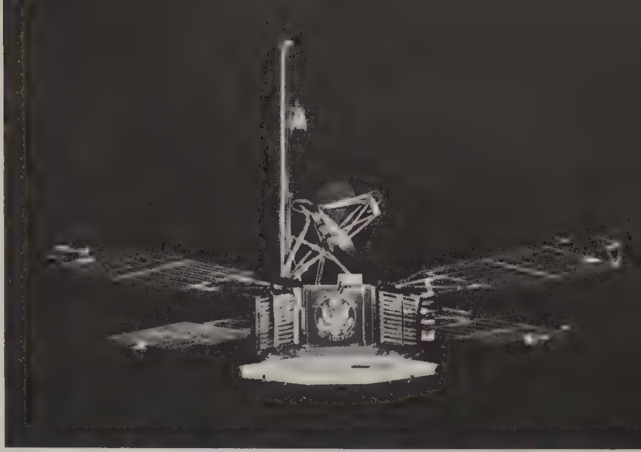
Surveyor 3 was launched on April 17 and reached the moon safely on April 19, but provided a last-minute thrill by bouncing three times before it settled down. The first time it bounced 35 feet (10.7 meters) above the surface, and the third time it skidded to rest 28 feet (8.5 meters) from the first point of contact. Such behavior was caused, apparently, by reflecting rocks that confused the probe's radar sensors during the approach. In its final position Surveyor 3 rested on a 10-degree slope inside and near the rim of a small crater. Some of its pictures were at first of poor quality because the tilted position caused its camera to point too close to the sun; in addition, reflection of solar radiation from the nearby rim heated the camera, and cooling periods had to be provided. By lunar nightfall on May 3, 6,315 pictures had been returned. The lunar surface was shown to be gray.

Surveyor 3's extendible metal claw was put into operation on April 20. First it made a hardness test of the surface by pushing down until the driving motor stalled. Then it dug four trenches that reached a maximum depth of 6 inches (15 cm). The results indicated that hardness increased somewhat with depth. The claw was used to pick up what seemed to be pebbles, but all but two of them shattered like clods of dirt when dropped.

Surveyor 4 was launched on July 14 and reached the moon on July 17. It was to land in the center of the visible face, but in the last seconds before landing the probe lost radio contact with earth.

Surveyor 5 was launched on September 8 along a direct trajectory to the moon. After 18 hours a midcourse exercise revealed that a valve was leaking and that insufficient helium would be left to permit maneuvering the spacecraft to a soft landing on the moon. While the craft continued its flight, ground crews hurriedly worked to develop substitute landing programs. Ignition of the main retrorocket was delayed until the spacecraft was 150,000 feet (45,750 meters) above the lunar surface. The rocket continued to operate until an altitude of only 4,400 feet (1,340 meters) was reached. These changes reduced the requirements placed upon the small vernier engines, and sufficient helium was available for the shorter final distance.

Surveyor 5 landed safely on two feet, recovered almost instantly, and skidded a short distance. It was left standing on a 20-degree slope in the Sea of Tranquillity, within a crater 30 feet (9 meters) wide and 5 feet (1.5 meters) deep.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MARINER 5 PROBE with solar panels extended. Passing behind Venus on Oct. 19, 1967, at a distance of 2,543 miles, it relayed back atmospheric and environmental data.

Surveyor 5 took a total of 18,006 pictures by September 24. It also made a chemical analysis of the lunar surface by means of a box containing six sources of radioactivity originating in the chemical isotope curium 242. Alpha particles bombarded the surface underneath the box, and the characteristics of the particles scattered back to six detectors served to identify the elements doing the scattering. The elements identified, and their probable percentages, were oxygen, 58%; silicon, 18%; aluminum, 6%; carbon, magnesium, and sodium, smaller amounts; and (as a group) elements heavier than sulfur, 13%. The composition is strongly suggestive of the terrestrial rock called basalt, which is of igneous origin. A bar magnet attached to one leg of the Surveyor picked up dust whereas an unmagnetized bar did not, indicating the presence of iron oxide in the surface material of the moon.

Surveyor 6, launched on November 7, reached the center of the visible face of the moon. The more than 20,000 pictures it returned revealed a surface rougher than any of the previous possible landing sites. Results of a surface analysis by means of alpha particle scattering, however, were similar to those of Surveyor 5. On November 24, Surveyor 6 made a unique maneuver when its three vernier engines were fired to lift it slightly off the lunar surface and move it a horizontal distance of 8 feet (2.4 meters); the craft then photographed the place where it had originally stood.

Surveyor 7 (the last in the series), launched on Jan. 7, 1968, landed in operating condition on January 9 in rugged terrain near the crater Tycho. The Surveyor tests together indicate a lunar surface analogous in properties to a damp sand.

Mariner Venus Probe. Launched on June 14, U. S. Mariner 5 followed a trajectory of 217 million miles (350 million km) to Venus. It passed behind the planet on October 19—the day after a Soviet probe reached Venus—at a distance of 2,543 miles (4,092 km). The effects on radio transmissions from the probe during the occultation were observed in order to furnish information on the planet's atmosphere. At the time, Venus was 49 million miles (79 million km) from the earth.

Preliminary analyses of the probe's findings indicated that Venus has no radiation belt and that it has

SUCCESSFUL NONMILITARY EARTH SATELLITES AND SPACE PROBES, 1967

Name	Launch site and date[1]	Launch vehicle[2]	Spacecraft weight at lift-off (pounds)[3]	Apsides of orbit (miles)[4]	Initial period (minutes)	Inclination of orbit (degrees)	Dimensions[5]	Remarks
Intelsat 2F-2	K, Jan. 11	T-D	192	22,099-22,674	1,448.6	2.1	56″ dia., 26½″ high	Commercial comsat
Cosmos 138	B, Jan. 19	N.A.[6]	N.A.	115-146	89.2	64.6	N.A.	Automated
Cosmos 139	U, Jan. 25	N.A.	N.A.	89-130	87.5	49.7	N.A.	Automated
ESSA 4	V, Jan. 26	T-D	285	881-884	114.2	101.5	42″ dia., 22″ high	Meteorological
Lunar Orbiter 3	K, Feb. 4	A-A	850	132-1,147	215	20.9	5′ dia., 5½′ high	In orbit about moon
Cosmos 140	B, Feb. 7	N.A.	N.A.	140-150	88.3	51.7	N.A.	Automated
Cosmos 141	P, Feb. 8	N.A.	N.A.	130-214	89.8	72.9	N.A.	Automated
D1-C	H, Feb. 8	Di	50	363-833	104.3	40.7	19.7″ dia., 7.9″ high	French geodetic satellite
Cosmos 142	B, Feb. 14	N.A.	N.A.	128-817	100.3	48.4	N.A.	Automated
D2-D	H, Feb. 15	Di	50	368-1,179	110.4	40.0	19.7″ dia., 7.9″ high	French geodetic satellite
Cosmos 143	B, Feb. 26	N.A.	N.A.	127-187	89.5	65.0	N.A.	Automated
Cosmos 144	P, Mar. 2	N.A.	N.A.	351-405	96.8	81.2	N.A.	Meteorological
Cosmos 145	U, Mar. 3	N.A.	N.A.	137-1,338	108.6	48.4	N.A.	Automated
OSO-3	K, Mar. 8	D	627	337-354	95.9	32.9	44″ dia., 37″ high	Solar observatory
Cosmos 146	B, Mar. 10	N.A.	N.A.	118-193	89.4	51.5	N.A.	Automated
Cosmos 147	B, Mar. 13	N.A.	N.A.	123-197	89.5	64.6	N.A.	Automated
Cosmos 148	P, Mar. 17	N.A.	N.A.	171-269	91.3	71.0	N.A.	Automated
Cosmos 149	B, Mar. 21	N.A.	N.A.	154-184	89.8	48.4	N.A.	Meteorological
Cosmos 150	P, Mar. 22	N.A.	N.A.	128-231	90.1	65.7	N.A.	Automated
Intelsat 2F-3	K, Mar. 23	T-D	192	22,180-22,263	1,434.5	1.4	56″ dia., 26½″ high	Commercial comsat
Cosmos 151	U, Mar. 24	N.A.	N.A.	391-391	97.1	56.1	N.A.	Automated
Cosmos 152	P, Mar. 25	N.A.	N.A.	174-317	92.2	71.0	N.A.	Automated
Cosmos 153	U, Apr. 4	N.A.	N.A.	125-180	89.3	64.6	N.A.	Automated
ATS 2	K, Apr. 5	A-A	815	115-6,947	218.9	28.4	5′ dia., 6′ high	Technological
Cosmos 154	U, Apr. 8	N.A.	N.A.	115-116	88.5	51.6	N.A.	Automated
Cosmos 155	U, Apr. 12	N.A.	N.A.	126-177	89.2	51.8	N.A.	Automated
Surveyor 3	K, Apr. 17	A-C	2,283[7]	Trajectory to moon			14′ dia., 10′ high	Lunar lander
ESSA 5	V, Apr. 20	T-D	320	843-885	113.5	101.9	42″ dia., 22″ high	Meteorological
Soyuz 1	B, Apr. 23	N.A.	N.A.	125-139	88.6	51.7	N.A.	Manned satellite
San Marco 2	Af, Apr. 26	S	285	135-498	94.9	2.9	26″ dia. sphere	Italian satellite
Cosmos 156	P, Apr. 27	N.A.	N.A.	350-350	96.9	81.2	N.A.	Meteorological
Lunar Orbiter 4	K, May 4	A-A	860	1,681-3,797[8]	720	85.5	5′ dia., 5½′ high	Lunar orbiter
Ariel 3	V, May 5	S	198	311-375	95.7	80.2	23″ dia., 35″ high	British satellite
Cosmos 157	U, May 12	N.A.	N.A.	125-184	89.4	51.3	N.A.	Automated
Cosmos 158	U, May 15	N.A.	N.A.	458-511	100.6	74.0	N.A.	Automated
Cosmos 159	U, May 17	N.A.	N.A.	236-35,572	1,174.2	51.8	N.A.	Automated
Cosmos 160	U, May 17	N.A.	N.A.	88-127	89.6	49.6	N.A.	Automated
Cosmos 161	B, May 22	N.A.	N.A.	127-213	89.8	65.7	N.A.	Automated
Molniya 1-E	B, May 24	N.A.	N.A.	285-24,682	715	64.8	N.A.	Comsat
Explorer 34	V, May 24	T-D	163	152-133,194	636	67	28″ dia., 10″ high	Interplanetary monitor
Cosmos 162	B, June 1	N.A.	N.A.	130-173	89.2	51.8	N.A.	Automated
Cosmos 163	B, June 5	N.A.	N.A.	162-382	93.1	48.4	N.A.	Automated
Cosmos 164	U, June 8	N.A.	N.A.	125-199	89.5	65.7	N.A.	Automated
Cosmos 165	U, June 12	N.A.	N.A.	131-956	102.1	81.9	N.A.	Automated
Venus 4	U, June 12	N.A.	2,433	Heliocentric orbit			N.A.	Towards Venus
Mariner 5	K, June 14	A-A	540	Heliocentric orbit			50″ wide, 9½′ long	Towards Venus
Cosmos 166	U, June 16	N.A.	N.A.	175-358	92.9	48.4	N.A.	Automated
Cosmos 167	B, June 20	N.A.	N.A.	124-177	89.2	51.8	N.A.	Automated
Cosmos 168	B, July 4	N.A.	N.A.	123-166	89.4	51.8	N.A.	Automated
Surveyor 4	K, July 14	A-C	2,290	Trajectory to moon			14′ dia., 10′ high	Lunar lander
Cosmos 169	U, July 17	N.A.	N.A.	89-129	87.6	49.7	N.A.	Automated
Explorer 35	K, July 19	T-D	230	Lunar trajectory			28″ dia., 7′ high	Lunar orbiter[9]
OGO 4	V, July 28	T-A	1,240	256-564	98.1	86.0	3′ square, 6′ high	Geophysical observatory
Cosmos 170	U, July 31	N.A.	N.A.	90-129	87.9	49.6	N.A.	Automated
Lunar Orbiter 5	K, Aug. 1	A-A	860	121-3,734[10]	510	85	5′ dia., 5½′ high	Lunar orbiter
Cosmos 171	U, Aug. 8	N.A.	N.A.	90-136	87.0	49.6	N.A.	Automated
Cosmos 172	U, Aug. 9	N.A.	N.A.	125-192	89.4	51.8	N.A.	Automated
Cosmos 173	P, Aug. 24	N.A.	N.A.	176-347	92.2	71.0	N.A.	Automated
Cosmos 174	U, Aug. 31	N.A.	N.A.	310-24,645	715	64.5	N.A.	Automated[11]
Biosatellite 2	K, Sept. 7	T-D	940	186-194	90.7	33.5	57″ dia., 7′ long	Life sciences studies
Surveyor 5	K, Sept. 8	A-C	2,216	Trajectory to moon			14′ dia., 10′ high	Lunar lander
Cosmos 175	P, Sept. 11	N.A.	N.A.	130-239	92.2	72.9	N.A.	Automated
Cosmos 176	P, Sept. 12	N.A.	N.A.	128-980	102.5	81.9	N.A.	Automated
Cosmos 177	U, Sept. 16	N.A.	N.A.	125-181	89.3	51.8	N.A.	Automated
Cosmos 178	U, Sept. 19	N.A.	N.A.	90-127	88.6	49.6	N.A.	Automated
Cosmos 179	U, Sept. 22	N.A.	N.A.	90-129	87.3	49.4	N.A.	Automated
Cosmos 180	P, Sept. 26	N.A.	N.A.	131-229	90.1	72.9	N.A.	Automated
Intelsat 2F-4	K, Sept. 28	T-D	192	21,790-22,515[12]	1,438.3	0.9	56″ dia., 26½″ high	Comsat[13]
Molniya 1-F	B, Oct. 3	N.A.	N.A.	310-26,600	718	65.0	N.A.	Comsat
Cosmos 181	U, Oct. 11	N.A.	N.A.	124-213	89.7	65.6	N.A.	Automated
Cosmos 182	U, Oct. 16	N.A.	N.A.	130-220	89.9	65	N.A.	Automated
Cosmos 183	U, Oct. 18	N.A.	N.A.	90-131	89.9	49.0	N.A.	Automated
OSO-4	K, Oct. 18	T-D	599	334-354	95.6	32.9	44″ dia., 37″ high	Solar observatory
Molniya 1G	B, Oct. 22	N.A.	N.A.	283-24,639	714	64.7	N.A.	Comsat
Cosmos 184	U, Oct. 25	N.A.	N.A.	394-394	97.1	81.2	N.A.	Meteorological
Cosmos 185	U, Oct. 27	N.A.	N.A.	324-551	98.7	64.1	N.A.	Automated
Cosmos 186	B, Oct. 27	N.A.	N.A.	130-146	88.7	51.7	N.A.	Automated
Cosmos 187	B, Oct. 28	N.A.	N.A.	90-130	87.4	49.6	N.A.	Automated
Cosmos 188	B, Oct. 30	N.A.	N.A.	124-171	89.0	51.7	N.A.	Automated
Cosmos 189	U, Oct. 30	N.A.	N.A.	332-372	95.7	74	N.A.	Automated
Cosmos 190	P, Nov. 3	N.A.	N.A.	125-215	89.8	65.7	N.A.	Automated
ATS 3	K, Nov. 5	A-A	1,574	22,216-22,253	1,436.4	0.4	5′ dia., 6′ long	Technological[14]
Surveyor 6	K, Nov. 7	A-C	2,200	Trajectory to moon			14′ dia., 10′ high	Lunar lander
Apollo 4	K, Nov. 9	Sn 5	285,000[15]	114-118	87	30	22′ dia., 120′ long	Saturn-Apollo test
ESSA 6	V, Nov. 11	T-D	285	874-922	115	102	42″ dia., 22″ high	Meteorological
Cosmos 191	P, Nov. 21	N.A.	N.A.	174-321	92.2	71	N.A.	Automated
WRESAT 1	Au, Nov. 28	R	110		100		30″ dia., 60″ long	Australia's first
Cosmos 192	P, Nov. 23	N.A.	N.A.	472-472	99.9	74	N.A.	Automated
Cosmos 193	P, Nov. 25	N.A.	N.A.	126-220	89.9	65.7	N.A.	Automated
Cosmos 194	P, Dec. 3	N.A.	N.A.	127-207	89.7	65.7	N.A.	Automated
Pioneer 8	K, Dec. 13	D	145	Heliocentric orbit			37″ dia., 35″ high	Interplanetary probe[16]
TTS 1	K, Dec. 13	D	40	183-304	92	33	14″ wide, 20″ high	Test and training
Cosmos 195	P, Dec. 16	N.A.	N.A.	131-233	90.1	65.7	N.A.	Automated
Cosmos 196	B, Dec. 19	N.A.	N.A.	140-551	95.5	49	N.A.	Automated
Cosmos 197	U, Dec. 26	N.A.	N.A.	137-314	91.5	48.5	N.A.	Automated
Cosmos 198	B, Dec. 27	N.A.	N.A.	165-175	89.8	65.1	N.A.	Automated

[1] Code for launch sites: K—Cape Kennedy, Fla.; V—Vandenberg AFB (Western Test Range), Calif.; W—Wallops Island, Va.; B—Baikonur, USSR; P—Plesetsk, USSR; U—Unknown site, USSR; H—Hammaguir, Algeria; Af—Offshore Kenya, Africa; Au—Woomera, Australia. [2] Launch vehicles: A—A, Atlas-Agena; S, Scout; T-A, Thor-Agena; T-D, Thor-Delta; A-C, Atlas-Centaur; Sn, Saturn 5; Di, Diamant; R, Redstone. [3] 1 pound equals 0.45 kg. [4] 1 mile equals 1.61 km. [5] 1 foot equals 30.48 cm. [6] N.A.—Not available. [7] Launch weight; landing weight, 620 pounds. [8] Changed to 48-2,450 mi. on June 8. [9] Perilune, 49.7 mi.; apolune, 4,779 mi.; period, 690 min.; inclination, 147.3 degrees. [10] Changed on Aug. 9 to 60-932 mi. [11] Final orbit. [12] Final orbit. [13] Called Pacific 2. Orbit synchronized on Sept. 30. [14] In final synchronous orbit. [15] Includes Apollo and Saturn third stage. [16] Perihelion, 0.990 astronomical units (AU); aphelion, 1,087 AU; period, 385.5 days; inclination to ecliptic, 0.57 degrees.

only a very weak magnetic field—less than 3/1,000 as strong as the earth's. The atmosphere—apparently about 75% to 85% carbon dioxide—has a faint glow on the night side and is extremely refractive for electromagnetic radiations, including light. The temperature of the planet's surface was recorded as 500° F (260° C). (See below, *Soviet Venus Probe.*)

Orbiting Solar Observatories. The third satellite in the OSO series was launched on March 8. It consists of one section that points at the sun, and another section that rotates like a wheel to give spin stabilization to the craft as a whole. The spacecraft is instrumented to study ultraviolet radiation, X-rays, cosmic rays, and the radiation reflected by the earth. OSO 4, launched on October 18, contains similar instrumentation.

Orbiting Geophysical Observatory. Launched on July 28, the fourth OGO was placed in a polar orbit. A boxlike structure with outstretched booms and solar cell paddles, it keeps one face turned toward the earth as it investigates the relationships between the earth's environment and solar phenomena. The 20 experiments aboard are concerned with magnetic fields, solar X-rays, cosmic rays, particles in the Van Allen belt, auroras, airglow, and ions and neutral particles in the upper air.

Pioneer. On December 13, Pioneer 8, the third in the current Pioneer program, was placed in an orbit around the sun in order to study the solar plasma, the magnetic field, and cosmic rays. When the earth passed Pioneer 8, 37 days later, the probe measured the magnetic tail of the earth at a distance of 2 million miles (3,2 million km). Together, the three Pioneers in orbit provide measurements in interplanetary space at widely separated points around the sun.

Test and Training Satellite. TTS 1, launched together with Pioneer 8, is a small octahedral satellite designed to transmit and receive the radio band to be used in manned Apollo craft. It affords each station in the Manned Space Flight Network the opportunity to check its equipment and to train personnel for later Apollo flights.

Explorers. "Explorer" is the name NASA gives to its smaller automated satellites. Explorer 34, launched on May 24 to measure energetic particles that could endanger human space travel, went into an elliptical orbit with an apogee (farthest point from the earth) of 133,194 miles (214,442 km). Explorer 35, with the same mission, is in lunar orbit. It measures the earth's magnetic field at the distance of the moon and observes phenomena in the magnetic tail of the earth, through which it passes once every lunar month.

Biosatellite. Biosatellite 2 was sent into orbit on September 7. The experiments section was recovered safely two days later, in midair, during its return to earth by parachute. The satellite contained 13 experiments to study the effects of weightlessness on various kinds of biological activity, including reactions to radiations. Among the cells, tissues, plants, and insects used were pepper plants, wheat seedlings, frog eggs, amoebae, mold, flour beetles, parasite wasps, and vinegar gnats. In the forward part of the satellite were seven radiation experiments subjected to strontium-85 radiation. Difficulties with communications, and a threatening storm in the recovery area, forced Biosatellite 2 to stay aloft only two of the three days that had been planned. (See also BOTANY.)

Applications Technology Satellites. The two ATS's launched in 1967 are designed to make technological and engineering studies that will be of use in the space effort. The first, launched on April 5, failed to achieve the planned circular orbit; the second was sent into a synchronous orbit on November 5 and is operating successfully. It carries technological experiments such as a spin-scan camera that uses the spin of a satellite to provide a line scan of the scene, an image dissector camera for instant picture transmission, and equipment to receive data from transmitting platforms at remote spots on the earth's surface.

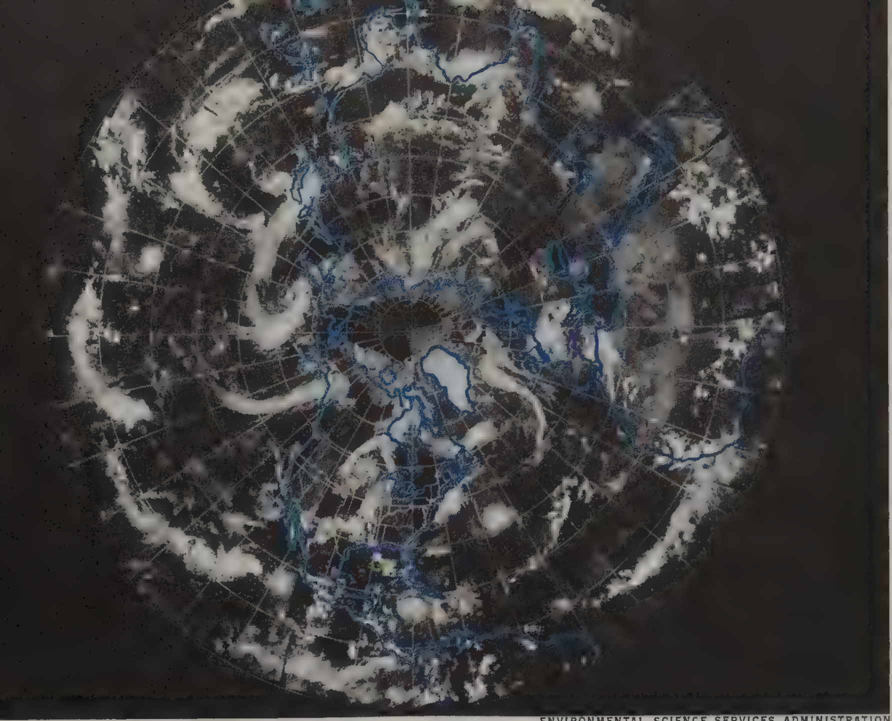
TASS VIA UPI

SOVIET VENUS 4 PROBE, before crashing into Venus on Oct. 18, 1967, ejected an instrument package (above, with heat shield partly removed) that parachuted to the surface.

Environmental Survey Satellites. The Department of Commerce continued its program of cloud observations as part of its weather forecasting program in 1967. ESSA 4 was launched as a replacement for the failing ESSA 2 of 1966. It transmits instant pictures of its environment to receiving stations around the world. On April 20, ESSA 5 was launched to continue the observations of ESSA's 1 and 3. This second kind of ESSA transmits detailed pictures to two ground stations, one in Alaska and one in Maryland. ESSA 6, of the same kind as ESSA 4, was launched on November 11.

Intelsats. Three Intelsat communications satellites —also called Lani Birds—were launched by the Communications Satellite Corporation; they are owned by the International Telecommunications Satellite Consortium of 55 nations. Intelsat 2 F-2, launched on January 11, was moved into position in a synchronous orbit over the International Date Line in the Pacific Ocean to provide communications services between mainland United States, Hawaii, and Asia. It can handle 240 two-way voice channels. Commercial service was begun on January 27. (Intelsat 2 F-4, launched on September 27, supplements this satellite.) Intelsat 2 F-3 was launched on March 22 to provide communications over the Atlantic Ocean, and was moved into position above longitude 5° west. Commercial service was begun during the first week in April.

NASA-Launched Foreign Satellites. In keeping with its policy of undertaking cooperative space activities with other nations, NASA launched two foreign satellites and assisted a third. Ariel 3, a British instrument package, was placed in orbit on May 5 to make a worldwide survey of the electron density and energy in the ionized layer of the atmosphere.



ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

ESSA 5 PHOTOS are combined in a mosaic that shows the cloud cover of the Northern Hemisphere on Sept. 14, 1967. Outlines of the continents are indicated in blue. Over 12 storm areas, including hurricanes, are visible.

San Marco 2, an Italian-built satellite, was launched on April 25 by an Italian crew from a platform standing in Formosa Bay off the coast of Kenya—the first satellite to be placed directly into a near-equatorial orbit from a site near the equator. San Marco 2 measures atmospheric density. The attempted launch, with NASA assistance, of the first spacecraft built by ESRO (European Space Research Organization) was unsuccessful.

Non-NASA Launchings. The U. S. space program outside of NASA continued with about 30 (usually multisatellite) launches in 1967. In January a Titan 3-C rocket carried eight satellites into orbit at an altitude of about 21,000 miles (33,810 km); seven were communications satellites. A launch on July 1 completed a ring of 17 satellites that orbit the earth slowly and provide communications around the world. Included in the launch were three satellites used to conduct experiments with ultra high frequency (UHF) radio signals, with an electronic despun antenna, and with the gravity stabilization of spacecraft by means of long booms.

On April 28 two Vela spacecraft were put into high elliptical orbits that subsequently were circularized at an altitude of 70,000 miles (112,700 km). The two spacecraft, on opposite sides of the earth, serve to detect nuclear tests; they bring to eight the number of Velas that have been put into orbit. On June 10 the biological satellite OV 3–4 was orbited, carrying simulated human tissue for radiation studies. On June 29 a geodetic satellite (SECOR), and an electron proton satellite (AURORA) to make auroral studies, were orbited. Also in June, the Air Force reported that communications had been achieved between two satellites on opposite sides of the earth, at altitudes of about 150 miles (240 km). The radio waves traveled in the ionosphere, following the curvature of the earth.

Soviet Venus Probe. On June 12 the USSR sent Venus (or Venera) 4, weighing 2,530 pounds (1,138 kg), into a trajectory toward Venus. On October 18 the main body of Venus 4 crashed into the surface of the planet, but as it approached it ejected a 39.4-inch (one-meter) sphere weighing 843 pounds (379.3 kg). The speed of the sphere was shown by retrorockets; then parachutes opened and carried it to the surface in 94 minutes from a height of about 16 miles (26 km). At times the capsule seemed to pause as though being subjected to upward drafts. Although it was designed for a soft landing, its instruments returned data only during the fall.

Preliminary results have been announced by the USSR. Temperatures were measured from 146° F (60.6° C) in the upper atmosphere to 518° F (270° C) at the time of cessation of signals—presumably at the surface. Pressures were measured as high as 323 pounds per square inch (22,709 grams per sq cm), or about 20 times the pressure of the earth's atmosphere. Instruments indicated the presence of 90% to 95% carbon dioxide, 0.4% to 0.8% oxygen, and 0.1% to 0.7% water. No magnetic field was measured near Venus by the Soviet probe, and no radiation belt was found.

Molniya. The Molniya Soviet communications satellites are placed in highly elliptical orbits that permit them to spend much of their time over the USSR. Molniya 1 B, already in service as 1967 began, suffered premature orbital decay on March 17. Molniya 1 E was launched on May 24, and two additional Molniyas were sent into orbit in October. Beginning on November 2, the Molniyas were used to transmit television across the USSR.

Cosmos. The Cosmos series of spacecraft consists of nearly all the automated satellites launched by the USSR. About 60 were launched in 1967. In general, the craft and their missions are not described; but the series has been used for scientific and surveillance missions and also to make tests for manned flights. Cosmos 144 and 156, identified as meteorological satellites, have supplied weather information to the United States, and Cosmos 149 photographed the cloud cover of the earth. Cosmos 166 appears to resemble the American OSO series in that it was oriented to face the sun, and it carried instruments to observe solar radiations.

French Satellites. The D 1-C and D 1-D (Diadème) French satellites were the last to be launched from the now abandoned site at Hammaguir, Algeria. The first, launched on February 8, failed to achieve its planned orbit, but the second was launched more successfully on February 18. Both are used to carry out geodetic observations of the shape of the earth. Each carries reflectors for laser beams that track the satellites from stations in France, Greece, and Algeria; originally both could be tracked by use of the Doppler shift in radio frequencies.

HENRY E. STAUSS
National Aeronautics and Space Administration

ADVANCES IN SPACE TECHNOLOGY

For both the United States and the Soviet Union, 1967 was a year of transition in the development of large launch vehicle systems and spacecraft. The U. S. Department of Defense achieved notable successes with the further development of military ballistic missiles: the Navy began the post-Polaris Poseidon rocket program, and the Air Force continued to develop the Titan 3C and D booster rocket vehicles that also are under consideration for certain NASA applications.

Saturn 5 Test Flight. The greatest achievement in U. S. space technology in 1967 was the successful flight test of the Saturn 5 rocket booster on November 9. All three stages of the booster were tested successfully, together with the Apollo capsule.

The configuration of the Saturn 5 launched from Pad 39 at Cape Kennedy was fairly close to that which will be used for the actual lunar attempt in 1969 or 1970. The S-1C first stage had five F-1 liquid oxygen/kerosene rocket engines with an overall thrust of 7.57 million pounds (3.4 million kg) at sea level. The S-2 second stage was powered by five J-2 liquid oxygen/liquid hydrogen engines that exerted a total thrust of about 1.1 million pounds (0.5 million kg) when fired at an altitude of more than 100,000 feet (30,500 meters). The third stage, S-4B, had one J-2 engine with a thrust of about 225,000 pounds (101,250 kg). With the Apollo spacecraft and launch system on top, the Saturn 5 stood 365 feet (111.3 meters) high.

A very important part of the 8½-hour flight of the Saturn 5 was the testing of the Apollo heat shield and escape systems. In order to give the spacecraft the necessary high re-entry velocity that it would have when returning from its lunar mission—about 30% higher than the velocity resulting from an earth-orbital re-entry—the craft was boosted to more than 10,000 miles (16,100 km) above the earth by a second combustion period of the third stage after about an hour and a half in orbit. The engines were cut off and the craft was oriented relative to the sun in such a manner that a heat balance was established between the low temperature of space and the solar radiation heat flux. The Apollo command module and its accompanying service module were then separated by small rockets from the third stage, and they coasted for a couple of minutes. After the service module propulsion system trimmed the orbital altitude and increased it by about another 1,000 miles (1,600 km), the spacecraft was separated from the service module and pointed downward for re-entry.

The spacecraft began to encounter serious re-entry drag at about 400,000 feet (122,000 meters). It had by that time achieved a velocity of about 36,000 feet (10,980 meters) a second, imparted to it primarily by the small service module rocket engines. The re-entry attitude of the spacecraft was maintained correctly, the multi-parachute system worked well, and the command module splashed down near Hawaii to be recovered safely.

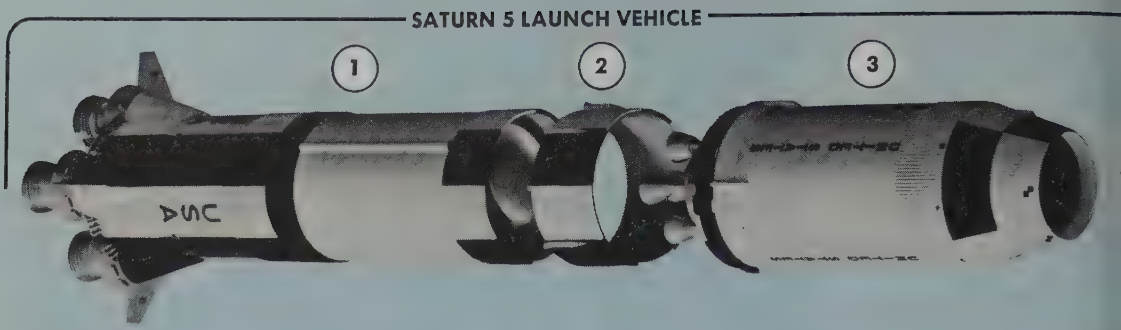
This almost perfect test of booster, spacecraft, and auxiliary systems surprised even the most hopeful participants. Ground-based systems such as the Vehicle Assembly Building (VAB) at Cape Kennedy passed the test with flying colors. (The building, one of the largest in the world, contains 130 million cubic feet, or nearly 3.7 million cubic meters, of space.) The adjacent Launch Control Center (LCC) also performed smoothly. This center, the electronic brain of Complex 39, is used for checking out and testing the operations while the Saturn 5 is being assembled in the VAB. Sixty television cameras positioned around the vehicle transmit pictures for display inside the LCC, and massive banks of computers and instrument links and displays tell the launch group the exact state of readiness of any part of the vehicle system.

The amazing Mobile Launcher took several hours to move Saturn 5 from the VAB to the launch site. The largest moving vehicle on earth, the Mobile Launcher weighs 12 million pounds (5.4 million kg) and stands 445 feet (about 136 meters) high. The many other systems checks performed during the Saturn 5 test also performed well without exception, as did the worldwide tracking and communications networks. Now the way is clear for the next test of a Saturn 5 with, possibly, a manned Apollo capsule, in mid- or late 1968.

Solid Propellant Propulsion. NASA leveled off its research and development activities in 1967, but many important and interesting programs continued despite certain budget cutbacks. For example, on June 17 the Aerojet General Corporation fired a short, 260-inch-diameter (660.4 cm), solid propellant engine at the company's Dade Division near Homestead, Fla. The static test firing produced the highest thrust ever recorded for a solid propellant engine—5.8 million pounds (2.6 million kg), compared with 3.5 million pounds (about 1.8 million kg) in solid propellant tests in 1966. The 75-foot-long (22.9 meters) engine contained 1.6 million pounds (0.7 million kg) of a solid propellant that resembles synthetic rubber and that contains some powdered aluminum to increase the combustion temperature. The combustion period was about 70 seconds long and the fuel demonstrated smooth burning characteristics, although near the termination of the firing some instability occurred and the rocket nozzle was torn loose.

M-1 Engine. Development activity on the M-1 liquid hydrogen/liquid oxygen engine tapered off in 1967. The Aerojet General Corporation had undertaken a vigorous program in 1966, the objective of which was the development of a 1.5 million-pound-thrust (about 0.7 million kg) engine for second or even first stages of NASA space boosters. Budget cuts and changing requirements curtailed activities on this engine in the latter part of 1967, however, and the project is relatively dormant. Some carry-over monies from NASA and company funding are available for company testing and for design and development work by a handful of engineers.

Nuclear Rocket. Good progress was made in 1967 in the joint NASA-Atomic Energy Commission nuclear rocket program. Three separate nuclear reactors were operated for up to 30 minutes at a time at power levels above 1,000 megawatts, and one of



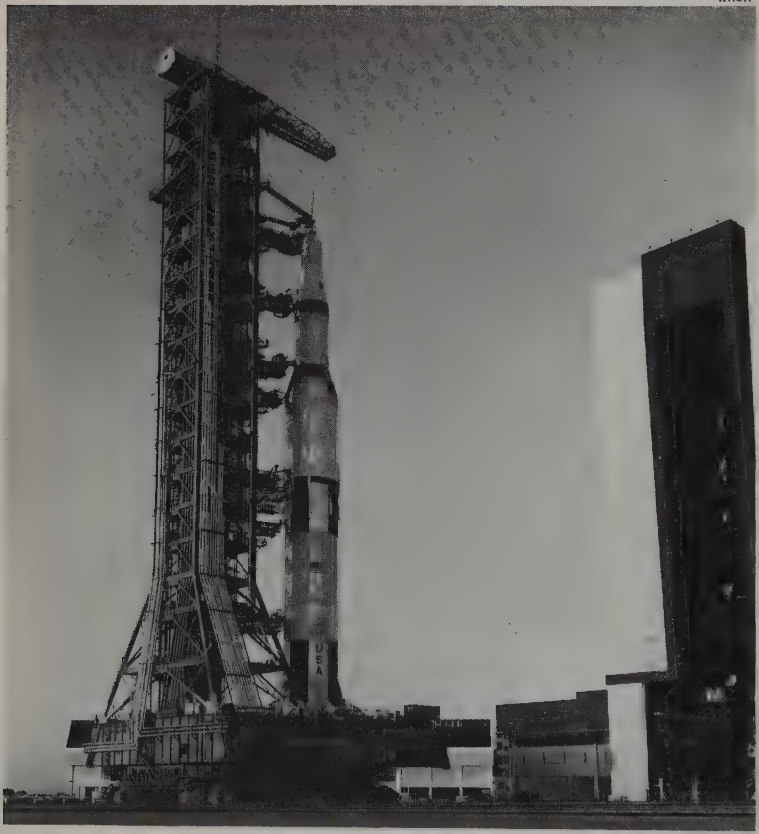
The total length of the Saturn 5 rocket combined with the Apollo spacecraft and its escape system is 364 feet. The first stage of the Saturn (1) is 138 feet long; its weight of 4.7 million pounds, with kerosene/liquid oxygen propellant aboard, accounts for ¾ of the launch weight of the entire assembly. The five F-1 engines together generate 7.5 million pounds of thrust. An interstage (2) connects the first with the second Saturn stage (3), which boosts the Apollo to a height of 117 miles and a speed of 15,300 miles per hour. The second stage is powered by five J-2 engines that burn liquid hydrogen and liquid oxygen, generating a total of more than a million pounds of thrust.

the tests reached a level of 1,500 megawatts. The burn-through and instability problems of past years were eliminated, and further progress was made toward a lightweight nuclear rocket engine. It will be some years, however, before a practical nuclear rocket fueled by liquid hydrogen is available.

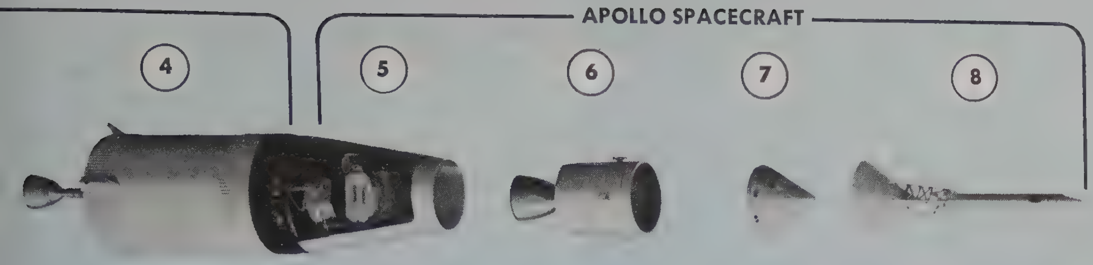
SNAP-8 Generator. As part of the overall NASA nuclear activities, a SNAP-8 (Space Nuclear Auxiliary Power) device was tested at a level of 35 kilowatts. This nuclear electric generator developed more test time in 1967 than had been achieved in all previous years combined. The device is one of a large family of similar nuclear electric generators that have a great potential for supplying electric power for long-duration space missions of the future. (The U. S. Navy also has considered these devices as power sources for long-duration underwater research craft.) Cost and weight and radiation problems, however, preclude their early use with manned vehicles.

Throttling Rocket Engines. The U.S. military and NASA made significant progress in 1967 in the

NASA



MOBILE LAUNCHER at Cape Kennedy moves the giant Saturn 5 rocket from the Vehicle Assembly Building to the launch site, a few weeks before the successful test flight on Nov. 9, 1967. The launcher, the largest moving vehicle in the world, weighs 12 million pounds (5.4 million kg).



NORTH AMERICAN ROCKWELL CORP.

The third stage (4) has a single J-2 engine that sends the spacecraft into final orbit. The Apollo lunar module (5) is housed in an adapter for the launch and early stages of flight. It is equipped with engines for the descent to and ascent from the moon's surface. The service module (6), which carries power and other support systems for the command module (7), has an engine that provides 22,000 pounds of thrust and that can be restarted as many as 50 times. The command module, 12 feet high, is "home" for the three moon-journeying astronauts. The launch escape system and the boost cover for protection against friction heat (8) are normally jettisoned 3 minutes 8 seconds after launch.

technology of throttling rocket engines (that is, engines that may have their thrust or "power" level varied). The major uses for such engines include midcourse corrections, rendezvous maneuvers, and orbital insertions. A throttling engine traditionally has been a difficult item to develop, because of the possibilities of combustion instability and oscillating flow in the rocket chamber. However, by such means as the proper design of flow controls, these engines are now fairly common—especially for use with manned vehicles like the X-15 aircraft.

The Aerojet General Corporation has developed the XLR-66 throttling rocket engine, which weighs less than 90 pounds (40.5 kg); the engine went through more than 200 tests successfully. The tests were conducted for the Naval Air Systems Command. The Lockheed Propulsion Company also has tested such an engine, with a maximum thrust of 2,500 pounds (1,125 kg) and a minimum thrust of 130 pounds (58.5 kg).

Hybrid Rocket Engines. Interesting experiments also were continued with the so-called hybrid rocket engine, an engine that burns a mixture of solid propellant and combustible liquids. The principles and practices of such engines have been understood for 15 years, at least. The engines still are not in operational use, but the time may come when they will find wide application for orbital maneuvering or planetary re-entry operations. In the engine, a liquid propellant is burned under controlled conditions with a solid propellant, yielding an over-all high-energy performance. When the liquid propellant combustion is stopped, the solid propellant combustion stops also. Throttling and start-stop capability are readily obtained, at the expense of over-all combustion efficiency. A hybrid engine was successfully tested in a 5-minute missile flight in December.

Materials Technology. Significant advances were made in the area of materials research by the application of boron fibers for the strengthening or reinforcing of plastics. Boron, one of the lightest quasi-metallic elements, has rather strange properties. By a complicated process of heating and vaporization, it can be produced in fine whiskers or fibers that possess enormous strength. A variety of missile casings and rocket engine liners and other important structural elements may be made of boron fiber-plastic sections in the future.

Major advances also were made in beryllium technology. This metal, which is lighter than magnesium, may well prove to be a major boon for spacecraft and missile designers. It is difficult to handle and to alloy, and it poses a health hazard when in powdered form. These metallurgy and handling problems are being solved, however, and if beryllium technology advances further, very significant savings may accrue when the metal is applied to such structures as space modules.

Soviet Technological Achievements. The USSR, whose rocket engineers believe in the clustering of rocket engines, demonstrated a variety of big boosters publicly in military parades and at space shows near Moscow. Western observers now believe that the Russians have a master booster with a cluster of more than a dozen rocket engines or chambers, the total thrust of which exceeds 2 million pounds (0.9 million kg). The booster is thought to be capable of orbiting up to 100,000 pounds (45,000 kg), which approaches the capability of NASA's Saturn 5. The Soviet Union also made remarkable progress in remote control propulsion orbital maneuvers, and was able to achieve the automatic linking in orbit of two unmanned spacecraft. It is thought that the Russians used "micro" thrusters (tiny long-burning rockets) and celestial guidance devices, coupled with earth-based radio control, to achieve this rendezvous. (See also above, *Manned Space Flight.*)

Other Nations. Among western European nations, France was the most active in 1967 in the development of rocket technology. The French launched the Bélier, Centaure, Dragon, Véronique, and Vesta rockets, sending them both on orbital and on high-altitude missions. Meanwhile, British activity—supported by German, Belgium, French, and Italian interest—continued at the Woomera Test Range in Australia with work on an advanced booster—with, however, only indifferent success. British financial difficulties, coupled with technical drawbacks in the booster (about the size of the U. S. Atlas), prevented the realization of an orbital spacecraft test. Britain has asked Australia and its European partners to increase their support of the Woomera Rocket Range operation.

KURT R. STEHLING
Aerospace Staff Consultant
Executive Office of the President

WIDE WORLD

GENERALISSIMO FRANCO (*right*) greets Prince Juan Carlos, the heir apparent to the vacant Spanish throne, in Madrid on October 29 at ceremonies marking the 28th anniversary of Franco's victory in the Spanish Civil War.

SPAIN

It became apparent in 1967, as legislation was passed to implement Spain's new constitution, that the regime of Francisco Franco was not going to relax its control on Spanish life. When the new constitution was passed in December 1966 and the direct election of 108 deputies to the 564-seat Cortes (parliament) was announced for the fall of 1967, many people thought that the Spanish government would be changed radically. However, by the spring of 1967 it became evident that the new legislation was simply intended to provide a smooth transition to a new regime (in the event of the death of Franco) without disturbing the established principles of the old regime.

National Developments. A trend toward a more conservative policy in regard to freedom of worship was apparent in 1967. The long-awaited freedom of worship law originally drafted by Foreign Minister Fernando María Castiella y Maíz was substantially changed when it finally went to the Cortes on March 3. Religious freedom was to be limited by "the requirements of public order." The freedom of Protestants to spread their creeds by writing, radio, or television was also restricted.

With the election of members of the Cortes scheduled for October, the opponents of the regime began to consider forming a common opposition without regard to ideological differences, but in the end they decided to boycott the election since they could not engage in effective campaigning.

On September 20, General Franco, as chief of state, nominated the 40 appointive members of the 99-member Council of the National Movement and 25 appointive members of the Cortes. On October 10, the elections for the Cortes were held, and since no organized political opposition had been allowed, the majority of the candidates elected were supporters of the regime. There were some surprises in the election, however. Several independent candidates won, in some cases defeating Franco supporters.

Opening the new Cortes on November 17, General Franco said it would take him 10 more years to perfect his regime, an indication that he was not immediately considering nominating a successor.

Strikes and Demonstrations. On December 12, Spain's supreme court ruled that all labor strikes were illegal. This action, coupled with General Franco's pledge, in his November 17 speech to the Cortes, to maintain public order in Spain, made it clear that the government was not going to allow a tradition of public protest to become established.

One reason for the increased restriction on public expression was the series of strikes and student demonstrations which had plagued Spain since the beginning of 1967. On January 2 a 1-day sit-down strike by 13,000 employees of four Madrid electronics plants led to the freeing of six labor leaders who had been held in jail. Other strikes then in progress in Barcelona and Bilbao reflected the general industrial recession which had caused the labor unrest. Later, on January 19, the heads of the official labor organization stated publicly in Madrid that Spanish economic policies were inadequate and that a more liberal labor policy was needed.

The following day a leading intellectual, José Luis López Aranguren, was arrested for holding an unauthorized student meeting in Santiago de Compostela. Professor López Aranguren had previously been deprived of his chair at the University of Madrid because of his participation in student demonstrations.

On January 23 the police charged that subversive propaganda circulated in Catalonia had originated in the Abbey of Montserrat, a Benedictine religious center. Their subsequent raid of the religious house increased the tension between the Roman Catholic Church in Catalonia, where there is a strong desire for autonomy, and the Franco government.

Even liberal lay leaders of the Spanish Catholic Action group urged the public to support progressive bishops in taking public positions on such questions as freedom of the press, elections, and social justice. The government countered by confiscating Catholic Action publications.

On January 30, students of the University of Madrid engaged in a 2-hour battle with the police. Two days later, 15,000 students at the University of Barcelona undertook a 48-hour strike in sympathy with fellow students striking at universities throughout the nation. These demonstrations resulted from the students' demand that their unions be freed from government control. They were coordinated with the strikes of miners in Asturias and textile workers in Barcelona, as well as a protest staged by metal and auto workers in Seville.

By April 4 the labor situation had further deteriorated. Some 5,000 workers fought the police in Bilbao. On April 21 the government was forced to suspend constitutional rights in Vizcaya for three months because of illegal acts, disturbances of public order, and what it called "activities by clandestine groups supported from abroad." The police of Bilbao, the capital of Vizcaya and the industrial center of the region, declared they had broken up a pro-Chinese Communist organization associated with Basque trade unionism. It was reported on April 16 that the Spanish government had announced that students, usually deferred from military service, would lose their exemptions if they participated in riots.

On May Day (May 1), demonstrations against the Franco regime erupted in at least 13 cities in the worst exhibition of violence since the beginning of the Civil War. Police were injured by crowds hurling stones and wielding sticks in Valencia, Barcelona, and Sabadell. Catholic priests were arrested in Basque and Catalan towns for acting as leaders of the demonstrations.

On May 17, Madrid University students again fought with police for three hours. The government had tried to abolish independent student organizations, and the students demanded the right to organize freely in all Spanish universities.

Economy. It was evident at the beginning of the year that the Spanish economy was confronted by difficulties. The trend toward inflation increased. Industrial production declined, and there was a deficit in foreign trade. The balance of payments revealed a deficit of $205 million, and the gold and foreign exchange level was $1,040,000,000, the lowest since 1962. Purchasing power was shrinking and the living standard of the mass of the people declining. Fear of unemployment increased. Low farm production forced Spain to import food in ever-increasing volume. The $1,270,000,000 spent by the 17 million tourists, a 19% increase over 1965, helped to ease the balance of payments deficit. On November 20, responding to the British devaluation of the pound and trying to alleviate its own problems, Spain devalued the peseta by 14.3%.

Spain doubled her exports to Cuba in 1966 by building ships for the Cuban merchant marine. The United States did not try to restrict these Spanish sales. On January 5, Spain signed an agreement for consular and trade relations with Rumania. The following month an agreement was concluded with the Soviet Union that established regular shipping service between Spain and the USSR.

Urban migration continued in Spain in 1967. Spaniards moved to Spanish cities and western European labor markets. As men have emigrated, they have been replaced by women in farm work and in the urban centers. By mid-1967, Spain did not appear to have any significant unemployment problem.

Nevertheless, the general trend toward inflation became more alarming because the rate in Spain was more rapid than elsewhere in Europe. The cost-of-living index increased 50% over that in 1960, and food prices doubled over those in 1964. This rise forced the government on September 16 to increase the minimum daily wage by 15%, to $1.60.

WIDE WORLD

UNIVERSITY STUDENTS in Madrid are dispersed by police during a riotous campus demonstration on January 30.

Minister of Agriculture Adolfo Díaz Ambrona urged Spaniards to drink more wine and produce less of it. This plea was prompted by an increasing surplus of domestic wine, undrunk and unexported.

SPAIN • Information Highlights

EUROPE
ASIA
AFRICA

Area: 194,883 square miles (504,748 sq km).
Population: 32,140,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Madrid, the capital, 2,599,330; Barcelona, 1,696,756; Valencia, 501,795; Seville, 474,082.
Government: *Chief of State*—Gen. Francisco Franco (officially assumed power Aug. 4, 1939; life tenure granted July 6, 1947); *Parliament*—Cortes, 564 members.
Religious Faiths: Roman Catholics, 99.7% of population.
Education: *Literacy rate* (1960), 87% of population aged 15 and over. *Total school enrollment* (1964)—4,944,549 (primary, 3,762,729; secondary, 745,062; teacher-training, 47,524; technical, 278,101; higher, 111,133).
Finance (1967 budget est.): *Revenues*, $4,160,000,000; *expenditures*, $4,160,000,000; *public debt* (1965), $2,566,000,000; *monetary unit*, peseta (60 pesetas equal U. S.$1; as of Nov. 20, 1967, 70 pesetas equal U. S.$1).
Gross National Product (1967): $24,600,000,000.
National Income (1964): $15,410,000,000; average annual income per person, $491.
Economic Indexes (1966): *Industrial production*, 210 (1958=100); *agricultural production* (1965), 133 (1956–57=100); *cost of living*, 166 (1958=100).
Manufacturing (metric tons, 1966): Cement, 11,832,000; crude steel, 3,744,000; wheat flour, 3,336,000; wine, 3,212,000; gasoline (1965), 720,000; meat, 697,200, sugar, 555,000; olive oil, 443,000.
Crops (metric tons, 1966): Grapes, 5,037,000 (ranks 3d among world producers); citrus fruit, 2,281,000 (world rank, 2d); tomatoes, 1,365,000 (world rank, 3d); wheat, 5,350,000; potatoes, 4,167,000; sugar beets, 4,054,000; barley, 2,359,000; maize, 1,163,000.
Minerals (metric tons, 1966): Mercury (1965), 82,760 76-lb. flasks (ranks 1st among world producers); coal, 12,936,000; iron ore, 5,196,000; lignite, 2,688,000; fluorspar (1965), 222,073; magnesite (1965), 93,000; lead, 62,400; zinc ore, 56,160; manganese ore (1965), 17,157.
Foreign Trade (1966): *Exports*, $1,254,000,000 (chief exports: citrus fruit, $150,000,000; olive oil, $47,000,000); *imports*, $3,574,000,000 (chief imports, 1965: nonelectrical machinery, $567,400,000; iron and steel, $259,600,000; petroleum, $239,800,000). *Chief trading partners* (1965): U. S. (took 12% of exports, supplied 17% of imports); West Germany (took 14% of exports, supplied 14% of imports); France (took 11% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 49,121 miles (79,050 km); *motor vehicles* (1965), 1,194,520 (automobiles, 807,317); *railways* (1966), 11,395 miles (18,335 km); *merchant vessels* (1966), 335 (1,759,000 gross registered tons); *national airline*, Iberia; *principal airports*, Barcelona, Madrid, Seville, Valencia.
Communications: *Telephones* (1966): 2,788,432; *television stations* (1967), 24; *television sets* (1967), 2,350,000; *radios* (1965), 4,550,000; *newspapers* (1963), 105 (daily circulation, 4,740,000).

Foreign Relations. There was an official demand in Spain during 1967 that the United States be denied an extension of the agreement for military bases. Although the existing accord does not expire until September 1968, it is believed that the protest will give the Spanish government a better bargaining position.

On January 5 the British government warned that it would hold Spain responsible for any action taken against British aircraft that continued to use the Gibraltar airport in defiance of the Spanish order against transgression of Spanish air space. A subsequent Spanish order (April 12) prohibited flights over Spanish territory and adjacent waters in the Gibraltar area. However, the order was not enforced so strictly as to close all of the Bay of Algeciras to British air traffic. The pressure was applied at Gibraltar to persuade Britain to relinquish its sovereignty over "the Rock" and give it to Spain.

A further stage in the Gibraltar dispute was reached on September 1, when the UN General Assembly's Committee Against Colonialism voted condemnation of British plans to hold a referendum on whether or not the population of Gibraltar wished to remain under the British crown, and instructed the two governments to negotiate for the termination of British rule. The action was viewed as a great Spanish diplomatic victory. The United States abstained in the voting. However, the referendum was held as scheduled on September 10, and the vote was overwhelmingly in favor of continued British rule.

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SPANISH LITERATURE

The relatively unimpressive showing in Spanish literature in 1967 may be explained, ironically enough, by the desperate straits to which a large segment of the publishing industry was reduced by the sudden disappearance of compulsory prior censorship. The resulting lack of criteria for manuscripts that would be considered "publishable" by government authorities made publishers wary of releasing any doubtful pieces. Thus, the publications issued in 1967 showed, for the most part, little innovation or originality.

Fiction. The most widely discussed novel of the season, *Cinco horas con Mario,* came from the pen of veteran author Miguel Delibes. Into this postmortem examination of a contemporary Spaniard's life, Delibes projected a stunning vision of a Spain still torn, decades after its rending civil conflict.

The major prizes for novels in 1967 were awarded to varied works. Vicente Soto received the Nadal award for his *La zancada,* a delicate "remembrance of things past." The Alfaguara prize went to Manuel Vicent for *Pascua y naranjas,* a penetrating view of modern Spain that casts twin spotlights on the conflicting worlds of the sophisticated tourist and the earthbound peasant. Angel María de Lera won the Planeta award for *Las últimas banderas,* which deals with the Spanish Civil War. Ramón Sender, a major novelist in exile, was granted the Barcelona prize. This act of recognition was made possible by the 1967 publication of the first Spanish edition of Sender's *Crónica del alba,* written in 1939.

Other established novelists whose works won praise in 1967 were Juan Goytisolo, who attained new excellence in both narrative and stylistic development in his *Señas de identidad;* Rodrigo Rubio, whose *La espera* probed still deeper the problem of rural emigration touched on in his *Equipaje de amor para la tierra* (1966); and Francisco Umbral, who adopted a new "beat" style in *Travesía de Madrid.*

Noteworthy collections of short stories for 1967 included Francisco Ayala's *De raptos, violaciones y otras inconveniencias,* Arturo del Hoyo's *El pequeñuelo y otros cuentos,* and Ana María Matute's *El arrepentido y otras narraciones.*

Nonfiction. Foremost among the scholarly publications of 1967 was Pedro Corominas' indispensable critical edition of *El libro de buen amor.* Also important and well reviewed were J. L. Alborg's *Historia de la literatura española* (vol. 2), Luis Rosales' *El sentido del desengaño en la poesía barroca;* Antonio Risco's *La estética de Valle Inclán,* James O. Crosby's *En torno a la poesia de Quevedo,* and Francisco Ruiz Ramón's *Historia del teatro español.*

Among the outstanding collections of essays published in 1967 were José Ferrater Mora's *Obras selectas,* the second volume of Gregorio Marañón's complete works, and the first Castilian version of Eugenio D'Ors *Cartas a Tina.*

Poetry. The coveted Adonais prize for poetry went to Miguel Fernandez for his *Sagrada materia,* a collection of meditative poems, predominantly written in free verse. Among other prizes for poetry, the Royal Academy's Fastenrath prize was awarded to Manuel Mantero's *Misa solemne,* a religious poem of great metrical variety; the Barcelona prize was granted to María de los Reyes Fuentes' *Acrópolis del testimonio,* for the purity and simplicity of its offerings; and the Leopoldo Panero prize went to Rafael Guillen's *Tercer gesto.*

Outstanding among other collections of poetry published in 1967 was *La verdad y otras dudas,* by Rafael Montesinos, whose technical virtuosity, especially in the short poetic forms, is reminiscent of Rafael Alberti and Antonio Machado y Ruiz. Other noteworthy collections were José Batillo's *La mesa puesta,* which clearly went along with the current trend toward "sociological" poetry, and Juan Van-Halen's *La frontera,* which delicately weaves together the themes of love and hope.

Noteworthy among "complete" works appearing in 1967 were Ramón de Garciasol *Antología provisional,* Victoriano Cremer's *Poesía total* (1944–1966), Rafael Morales' *Poesías completas* (1940–1958), and Carmen Conde's *Obra poética* (1929–1966).

Theater. The theatrical works of Ramón del Valle Inclán—particularly such short farces as *La cabeza del Bautista* and *La marquesa Rosalinda,* which were revived for the centenary celebrations in 1966—dominated the theatrical scene during most of 1967.

The outstanding contemporary plays were Miguel Mihura's *La decente,* another masterful success for this playwright whose hallmark is psychological comedy that is refreshingly removed from sweeping world problems, and Antonio Buero Vallejo's *El tragaluz,* perhaps the culmination of this author's efforts in dramatic symbolism. Victor Ruiz Iriarte's *La señora recibe una carta* was far less successful with critics.

Translations. Important translations into English during 1967 included Benito Pérez Galdós' *Compassion,* tr. by Joan (Coyne) MacLean; Vicente Blasco Ibáñez' *Reeds and Mud,* tr. by Lester Beberfall; Juan Goytisolo's *The Party's Over: Four Attempts to Define a Love Story,* tr. by José Yglesias; *The Collected Works of St. John of the Cross,* tr. by Kieran Kavanaugh and Otilio Rodriguez; and *The Poem of the Cid,* tr. by Paul Blackburn.

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UPI

WIDE WORLD

FRANCIS CARDINAL SPELLMAN, archbishop of New York and vicar general of the United States armed forces, is shown in his diocesan vestments on Dec. 10, 1965, and in chaplain's uniform at Long Binh, Vietnam, Dec. 24, 1966.

SPELLMAN, Francis Cardinal

American cardinal of the Roman Catholic Church: b. Whitman, Mass., May 4, 1889; d. New York, N. Y., Dec. 2, 1967.

Francis Cardinal Spellman served as a cardinal of the Roman Catholic Church for 21 years and as a archbishop of New York City for 28 years. The policy that guided his actions during these decades of change, he enunciated when he became archbishop: "I shall pray as if everything depended on God. I shall work as if everything depended on me."

Francis Joseph Spellman began his education in the public schools of his native town, and received his A. B. in 1911 at Fordham University. He went at once to the North American College in Rome where he was ordained in 1916. In the same year he was made a doctor of sacred theology at the College of the Propaganda.

On a visit to Rome in the Jubilee year, 1925, Father Spellman was made director of a church playground project, an appointment that led to a seven-year stay in Rome. The appointment also brought him into contact with Eugenio Cardinal Pacelli, papal secretary of state and later Pope Pius XII. Pacelli consecrated Spellman a bishop in 1932, and appointed him auxiliary bishop of Boston.

The see of New York became vacant in September 1938. In March 1939, Cardinal Pacelli became Pius XII, and on April 24 he appointed Spellman archbishop of New York City. During his more than 28 years in this position, Archbishop Spellman guided his diocese through a period of growth and change. The Catholic population of the diocese rose from about 1,000,000 to 1,800,000, largely because of a great wave of Puerto Rican immigration. Archbishop Spellman arranged for 217 priests to be prepared by special courses to carry on their ministry in Spanish. To meet the needs of the diocese's 104,000 additional students, 147 new schools were established.

When he was appointed archbishop of New York in 1939, the new ordinary was also made military vicar, responsible for the spiritual care of all American Roman Catholics associated with the armed forces. When the United States entered World War II in 1941, 500 chaplains were ready; during the course of the war this number grew to 5,300. By 1967, the military vicar had two bishops assisting him as delegates and 2,326 chaplains of various ranks. His duties as vicar required a great deal of travel, beginning with a first journey in 1943 that took 24 weeks and covered 46,000 miles in Europe, the Near East, and Africa. He went to Korea in 1951 to be with the troops for Christmas, a practice that he continued until his last Christmas in 1966, in Vietnam.

In addition to his duties as archbishop and as military vicar, Spellman was helpful in a diplomatic capacity to both President Franklin D. Roosevelt and to Pope Pius XII. In 1939 he served as intermediary in the appointment of Myron C. Taylor as the President's representative to the Holy See. He also made visits of state to Central and South America, and twice served as a Papal Legate at Eucharistic Congresses.

At the Great Consistory called by Pius XII in 1946, 32 new cardinals were created. Among them was Cardinal Spellman, the fourth archbishop of New York to be so honored. As a cardinal, he attended the conclaves that elected John XXIII and Paul VI, as well as all sessions of the Second Vatican Council. At the Council he was influential in formulating the Declaration on Religious Freedom and in working toward better Christian-Jewish relations.

In 1966, observing the Golden Jubilee of his priesthood, Cardinal Spellman offered his resignation as archbishop. The Holy Father refused to accept the resignation, and at Christmas the Cardinal made his usual visit to the servicemen overseas, this time to Vietnam. He was considering the possibility of another Christmas trip when, on Dec. 2, 1967, he died suddenly of a stroke. His funeral was attended by President Lyndon Johnson and other public officials. Cardinal Spellman was buried under the High Altar of St. Patrick's Cathedral in New York.

Robert I. Gannon, S. J.
Author of "The Cardinal Spellman Story"
President Emeritus, Fordham University

SPORTS

DALLAS
17
PACKERS
21
QUARTER
MINUTES
SECONDS
TO GO
BALL ON

GOALPOST topples under the weight of delirious Green Bay Packer fans after Green Bay came from behind to defeat the Dallas Cowboys, 21–17, in the closing seconds of the National Football League championship game, Dec. 31, 1967. The temperature at Lambeau Field stood at 13 degrees below zero.

WIDE WORLD

SPORTS

Defending champions got left behind in an exciting year that was marked by pre-Olympic bustle and anticipation among the amateurs and by expansion in the professional sports. The amateurs were concentrating on the Pan-American Games, held in Winnipeg, Canada, July 23 through Aug. 6, 1967, and the forthcoming 1968 Winter Olympics in Grenoble, France (February 5–18) and the Summer Games in Mexico City (October 12–27). The professionals were mainly concerned with meeting the demand for more top-grade sports and the ever-growing appetite of television viewers for live action.

In the fulfillment of the latter need, millions of fans sat in their comfortably warm living rooms on Dec. 31, 1967, and watched with fascination as 50,861 spectators shivered in the Green Bay (Wis.) Stadium with the temperature standing at 13 degrees below zero. The Wisconsin gathering was cheering the Packers, who stormed down the field in the final freezing minutes under the cool direction of Bart Starr, and then, with 13 seconds left to play, scored a touchdown that beat the Dallas Cowboys, 21–17, for the National Football League championship.

The triumph was unusual, not for Green Bay, which won its third championship in a row, but because of all the teams that entered the year as champions in their sport, the Packers were the only major U. S. team to retain its title. And they had only 13 seconds left to win that distinction.

A couple of hours after the Green Bay experience, the TV audience saw the Oakland Raiders complete a 40–7 trouncing of Houston for the American Football League title, replacing the Kansas City Chiefs. That crowning of a new champion on the last day of 1967 completed a pattern set in the first of the year's major championships, when the Philadelphia 76ers ousted the long-reigning Boston Celtics in the National Basketball Association (NBA).

Expansion hit all of the major sports. The NFL added New Orleans, and that city responded with an average attendance of 75,400 for seven home games. The AFL put a franchise in Cincinnati for 1968. The National Hockey League had a complete new division of six teams swing into competition in October. Basketball expanded with not only two new NBA teams in San Diego and Seattle but also a brand new 11-city league (the American Association). In baseball, the American League in November awarded a franchise for play in 1969 to Seattle and one to Kansas City to replace the Athletics who had just been moved to Oakland.

Soccer, a game that had been pursued diligently by ethnic groups in the larger population centers for years, was put before the American sporting public in large dimensions by two groups of warring promoters, with unenthusiastic reception.

Other champions in addition to the Celtics and Chiefs were ousted. In college basketball, the University of Texas at El Paso (formerly Texas Western) lost its title to the University of California at

Los Angeles, led by 7-foot, 1⅜-inch Lew Alcindor. The Uclans had an undefeated season that ran their string of victories to 34 games. In the National Hockey league, the Montreal Canadiens lost their championship to the Chicago Black Hawks and the Stanley Cup to the Toronto Maple Leafs. The Hawks were paced by Stan Mikita and Bobby Hull.

The biggest upsets, however, came in baseball. The Baltimore Orioles, the world champions of 1966, never got started and finished in a tie for sixth place; and the National League champions, the Los Angeles Dodgers, playing without retired pitcher Sandy Koufax, finished eighth. The championships went to the Boston Red Sox, who climbed out of ninth place the season before and won the American League pennant in the tightest finish in that league's history, and to the St. Louis Cardinals, who also won the World Series in a 7-game battle. The Red Sox got much of their momentum from Carl Yastrzemski, who won the triple crown in batting.

In college football only Clemson, Morgan State, Wilkes, North Texas, Wyoming, and Massachusetts retained their titles in the major conferences. Notre Dame relinquished its national championship to Southern California. In rowing, Pennsylvania won the Intercollegiate Association championship, and Harvard continued unbeaten in college competition for the fourth year.

Individual champions were swept under, too. In tennis, Mrs. Billie Jean King did retain the Wimbledon and U. S. indoor crowns, Charles Pasarell kept the national indoor title, and Roy Emerson again won the Australian championship. But Mrs. King replaced Maria Bueno as the grass court champion, and John Newcombe was a new winner at both Wimbledon and Forest Hills. In golf all of the major titles changed hands. Gay Brewer won the Masters; Jack Nicklaus, the U. S. Open; Roberto de Vicenzo, the British Open; and Bob Dickson, the U. S. and British amateurs. Lou Dill took the women's amateur and Catherine LaCoste, an amateur from France, the women's open. Even the horses had trouble. Damascus replaced Buckpasser as the American champion, and Nevele Pride, a 2-year-old trotter, was named Harness Horse of the Year. Track and field enthusiasts hailed chiefly among the new champions Paul Wilson, the pole vault record-holder at 17 feet, 7¾ inches; and Jim Ryun who set a world mark for 1,500 meters after reducing his own mile record to 3:51.1. U. S. athletes won the Pan-American Games and beat the British Commonwealth, Italy, Spain, and England in dual meets.

U. S. swimming champions broke each others' listed world records 52 times in meets at home, at Winnipeg, and abroad. The names of Mark Spitz, Debbie Meyer, Catie Ball, Pam Kruse, and Elaine Tanner of Canada, were added to the other teen-aged swimming wonders. Another Canadian girl, Nancy Greene, won the World Cup for skiing. The men's honors went to Jean-Claude Killy of France.

A. J. Foyt replaced Graham Hill as the winner of the Indianapolis 500 auto race and succeeded Mario Andretti as the season's top American driver. Foyt won at Indianapolis when a small part broke in a turbine-powered car driven by Parnelli Jones with three laps to go. Denis Hulme of New Zealand dethroned Jack Brabham as the world grand prix racing champion. Mark Donohue won the U. S. road racing title; Richard Petty took Nascar honors.

Boxing lost its foremost champion, but not in the ring. Cassius Clay (Muhammad Ali), the undefeated heavyweight, was stripped of the title when he refused induction into the U. S. Army.

ARCHERY

World Championships

(Amersfoort, the Netherlands, July 25–28)

Men—Ray Rogers, Muskogee, Okla. (2,298)
Women—Maria Maczynska, Poland (2,240)
Team—*Men:* United States (6,816); *women:* Poland (6,686)

National Archery Association Championships

(Greene, N. Y., August 7–11)

Men—Ray Rogers, Muskogee, Okla. (3,824); *crossbow:* George Gurik, Moline, Ill. (2,958)
Women—Mrs. Ardelle Mills, Minnetonka, Minn. (3,769); *crossbow:* Margaret Breneman, Cincinnati, Ohio (2,313)

Professional Archers Association Championships

(Pasadena, Calif., August 12–13)

Men—Victor Berger, Springfield, Ohio (591)
Women—Evelyn Goodrich, Flint, Mich. (570)

National Field Archery Association Championships

(Jackson, Miss., July 24–28)

Barebow

Men—*Open:* Frank Gandy, Bartow, Fla. (2,691); *amateur:* Jay W. Jackson, Arlington, Tex. (2,439)
Women—*Open:* Betty McKinney, Muncie, Ind. (2,220); *amateur:* Eunice Schewe, Roscoe, Ill. (2,024)

Freestyle

Men—*Open:* Stan Warner, North English, Iowa (2,740); *amateur:* Benny Tirado, Brooklyn, N. Y. (2,630)
Women—*Open:* Ann Butz, New York, N. Y. (2,561); *amateur:* Doreen Wilber, Jefferson, Iowa (2,488)

Bowhunter

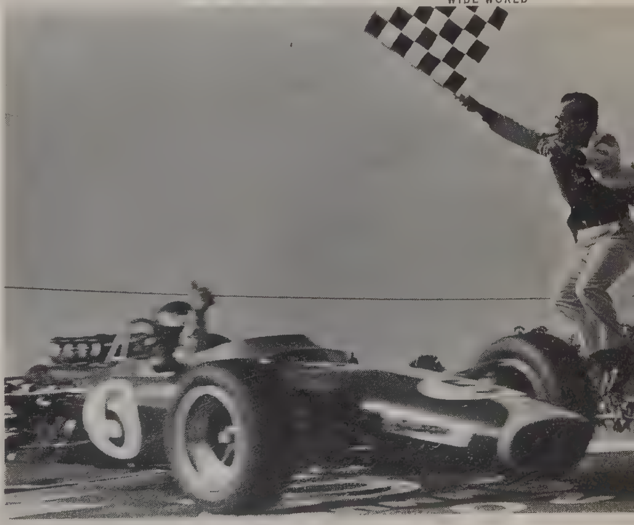
Men—Chuck Ingram, Dallas, Tex. (2,270)
Women—Bobbie Lois Ragsdale, Lewisville, Tex. (1,013)

AUTO RACING

World Championship Grand Prix Races

South Africa (Johannesburg, January 2)—Pedro Rodriguez, Mexico (driving a Cooper-Maserati; distance 203.5 miles; time, 2:05:45.9; 97.095 mph)
Monaco (Monte Carlo, May 7)—Denis Hulme, New Zealand (Repco-Brabham; 195.1 mi; 2:34:34.3; 75.996 mph)
Netherlands (Zandvoort, June 4)—Jim Clark, Scotland (Lotus-Ford; 234.5 mi; 2:14:45.1; 104.4 mph)
Belgium (Francorchamps, June 18)—Dan Gurney, Costa Mesa, Calif. (All-American Eagle; 244.7 mi; 1:40:49.4; 145.988 mph)
France (Le Mans, July 2)—Jack Brabham, Australia (Repco-Brabham; 219.5; 2:13:21.3; 99 mph)
Britain (Silverstone, July 15)—Jim Clark (Lotus-Ford; 233.6 mi; 1:59:25.6; 117.64 mph)
West Germany (Adenau, August 6)—Denis Hulme (Repco-Brabham; 214 mi; 2:05:55.7; 101.4 mph)
Canada (Mosport Park, Ont., August 27)—Jack Brabham (Repco-Brabham; 220 mi; 2:40:40; 82.79 mph)
Italy (Monza, September 10)—John Surtees, Britain (Honda; 243 mi; 1:43:45; 140.42 mph)
United States (Watkins Glen, N. Y., October 1)—Jim Clark (Lotus-Ford; 248.4 mi; 2:03:13.2; 120.95 mph)
Mexico (Mexico City, October 22)—Jim Clark (Lotus-Ford; 201 mi; 1:59:28.7; 101.5 mph)

WIDE WORLD



JIM CLARK signals thumbs up at the finish line as he wins the U. S. Grand Prix at Watkins Glen, N. Y., October 1. Clark's average speed in his Lotus-Ford was 120.95 mph.

WIDE WORLD

BOB GIBSON, St. Louis Cardinals pitcher, receives congratulations from his teammates after defeating the Boston Red Sox, 7–2, in the last game of the 1967 World Series. It was his third win of the Series.

Other Races

Indianapolis 500 (May 31)—A. J. Foyt, Houston, Tex. (Coyote-Ford; 3:18:24.44; 151.207 mph; purse, $171,227). Started May 30; postponed by rain after 18 laps.
Daytona Continental 24-Hour (Daytona Beach, Fla., February 4–5)—Lorenzo Bandini, Italy, and Chris Amon, New Zealand (Ferrari; 2,537.46 mi; 105.688 mph)
12-Hour Endurance (Sebring, Fla., April 1)—Mario Andretti, Nazareth, Pa., and Bruce McLaren, New Zealand (Ford; 1,237 mi; 102.9 mph)
24-Hour Endurance (Le Mans, France, June 10–11)—Dan Gurney, Costa Mesa, Calif., and A. J. Foyt, Houston, Tex. (Ford; 3,220.4 mi; 135.482 mph)
Riverside 500 (Riverside, Calif., January 29)—Parnelli Jones; Torrence, Calif. (Ford; 91.08 mph)
World 600 (Charlotte, N. C., May 28)—Jim Paschal, High Point, N. C. (Plymouth; 135.832 mph)
Atlanta 500 (Atlanta, Ga., April 2)—Cale Yarborough, Charlotte, N. C. (Ford; 131.078)
Rebel 400 (Darlington, S. C., May 13)—Richard Petty, Randleman, N. C. (Plymouth; 125.371 mph)
Carolina 500 (Rockingham, N. C., June 18)—Richard Petty (104.432)
Firecracker 400 (Daytona Beach, July 4)—Cale Yarborough (143.583)
Southern 500 (Darlington, S. C., September 4)—Richard Petty (130.423)
Volunteer 500 (Bristol, Tenn., July 23)—Richard Petty (78.705)
Dixie 500 (Atlanta, Ga., August 6)—Dick Hutcherson (Ford; 132.248)

Individual Champions

World—Denis Hulme, New Zealand (45 points)
U. S. Auto Club Big Car—A. J. Foyt, Houston, Tex. (3,440 pts); Mario Andretti, Nazareth, Pa. (3,360)
NASCAR—Richard Petty, Randleman, S. C. (42,472)

Sports Car Club of America

U. S. Road Racing Champions

Road Racing (8 races)—Mark Donohue, Media, Pa., Penske-Sunoco Special (54 pts)
Canadian-American Challenge Cup (6 races)—Bruce McLaren, McLaren-Chevrolet (30 pts)
Trans-America Sedans (12 races)—*Under 2-liter:* Porsche (75 pts); *over 2-liter:* Ford (64 pts)

BADMINTON

World Championship Thomas Cup (Djakarta, Indonesia, June 9–10)—Malaysia defeated Indonesia by default (called off because of rioting fans)
All-England Championships (Wembly, England, March 15–18)—*Men's singles:* Erland Kops, Denmark; *women's singles:* Mrs. Judy Devlin Hashman, Baltimore, Md.; *men's doubles:* Kops and Henning Borch, Denmark; *women's doubles:* Mrs. Ulla Strand, Denmark, and Imre Rietveld, Netherlands; *mixed doubles:* Mrs. Strand and Svend Andersen, Denmark
U. S. Championships (Flint, Mich., April 12–15)—*Men's singles:* Erland Kops; *women's singles:* Mrs. Hashman; *men's doubles;* Kops and Joe Alston, Pasadena, Calif.; *women's doubles:* Mrs. Hashman and Rosine Jones, New York; *mixed doubles:* Jim Sydie, Scotland, and Mrs. Hashman; *senior men:* James Butler, Toronto
Canadian Open (Winnipeg, March 31–April 1)—*Men's singles:* Erland Kops; *women's singles:* Alison Daysmith, Vancouver; *men's doubles:* Roger Mills and Colin Beacom, England; *women's doubles:* Pat Moody and Jean Miller, Montreal; *mixed doubles:* Mills and Sharon Whitaker, Toronto
Canadian Closed (Winnipeg, March 31–April 1)—*Men's singles:* Wayne MacDonnell, Vancouver; *women's singles:* Alison Daysmith; *men's doubles:* Jamie Paulson, Calgary, and Yves Pare, Montreal; *women's doubles:* Pat Moody and Jean Miller; *mixed doubles:* Pare and Miss Moody

BASEBALL

Certain dissatisfied residents stirred up the most commotion in Boston since the 1770's, and the result was the closest battle for the American League championship in the 66-year history of the league. The Red Sox won it on the last day of the season by concluding a two-game sweep over the Minnesota Twins, and then waiting in the dressing room while the California Angels defeated Detroit and kept the Tigers from tying for the title. Also waiting for a winner to emerge were the St. Louis Cardinals, who found National League competition more of a tea party; they had clinched the pennant two weeks earlier, on September 18.

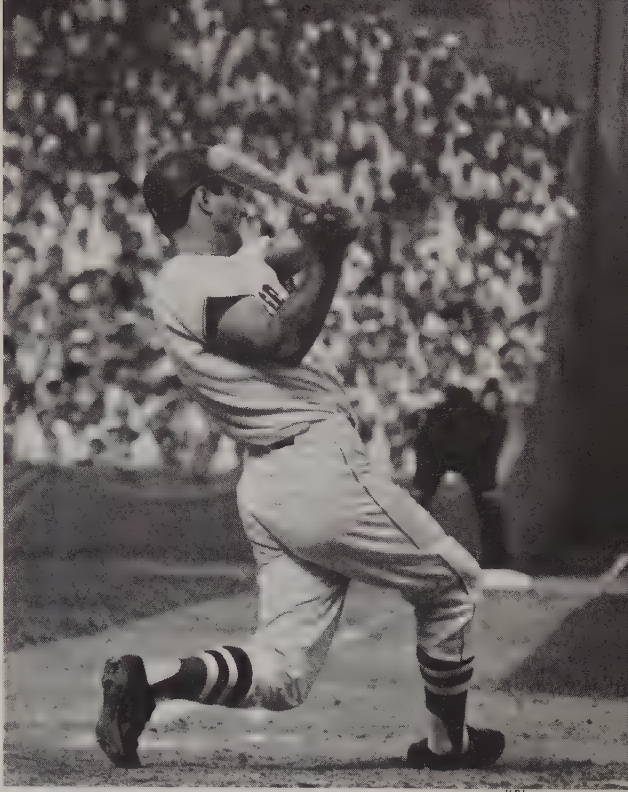
The Red Sox uprising that carried the team from ninth place the previous year to the top in 1967 was led by Carl Yastrzemski, the left fielder; Jim Lonborg, a 25-year-old right-handed pitcher in his second year in the majors; some young and eager fielders; and Manager Dick Williams, in his first major league effort. Yastrzemski won the triple crown—he led the league in hitting with .326, in runs batted in with 121, and in home runs with 44 (the same number hit by Harmon Killebrew of the Twins)—and was named the American League's MVP.

The National League champions, by contrast, were manned mainly by experienced personnel and led by two former star players. Red Schoendienst was the field manager, and his old roommate, Stan Musial, was in charge of the front office. They had Orlando Cepeda, who won the National League's MVP award, at first base; Julian Javier at second; and Curt Flood and Lou Brock in the outfield.

In the American League, with only three days left in the regular season, Minnesota, Boston, Detroit, and Chicago were all bunched at the top, 1½ games apart. Washington eliminated the White Sox on Friday night. Minnesota faced Boston, needing one victory to clinch a tie; and Detroit met California in four games, needing three victories for a tie. However, the Red Sox, who had to win twice, jolted the Twins in both games, while the Angels split with the Tigers.

The Red Sox dropped behind at the start of the World Series but evened it up before yielding in the seventh game to Bob Gibson, the Cardinal hero who allowed only 14 hits in winning three games.

After Gibson had beaten them, 2–1, in the first game, the Red Sox evened the Series with Lonborg


UPI

SLUGGER Carl Yastrzemski, here connecting for a home run in the World Series, led Boston to the American League flag and won for himself the most valuable player award.

CARL YASTRZEMSKI, the Boston Red Sox left fielder, in 1967 captured baseball's triple crown of batting, won the American League's most valuable player award, and made the name "Yaz" a household word in New England. The left-handed batter dominated the offense that carried the Red Sox to the American League pennant and through a seven-game losing struggle with St. Louis in the World Series. Yastrzemski, who had spent the winter pursuing an intense conditioning program, took the hitting title with a .326 average, batted in the most runs with 121, and shared the home run leadership with 44 (the three parts of the triple crown).

Carl Michael Yastrzemski was born in Southampton, N. Y., on Aug. 22, 1939. He was signed by the Red Sox in 1958 for a reported $100,000 bonus while a freshman at Notre Dame. He became a regular Boston outfielder in 1961, won the batting title in 1963 with .321, and played in the All-Star games in 1963 and 1967. He graduated from Merrimack College in 1966.

pitching a masterpiece. He held the Cards hitless until Javier doubled with two out in the eighth inning. That was the only Cardinal hit, and Boston won, 5–0, with Yastrzemski hitting two home runs. At home, St. Louis won the third game, 5–2, behind Nelson Briles, and the fourth, 6–0, as Gibson limited Boston to five hits. But with the Series seemingly sewed up and playing at home, the Cards were stalled again by Lonborg, 3–1, in the fifth game.

Again at home, the Red Sox went on a hitting binge and, led by Yastrzemski, tied the Series with an 8–4 triumph. However, the Boston dream ended when Gibson took charge in the seventh game, beating Lonborg, who had only two days' rest, 7–2. Lou Brock, the Cardinal outfielder, stole three bases in the final, setting a World Series record of seven.

Before the Series excitement had died down, Charles O. Finley, the owner of the Athletics, asked and received permission to move the franchise from Kansas City to Oakland for the 1968 season. This, with the Angels at Anaheim, gave the American League two clubs on the Pacific Coast. The league also voted to expand to 12 teams in 1969 by taking in Seattle and replacing the team in Kansas City. The National League, disturbed by the move, took no immediate steps toward expansion but indicated it would probably do so no later than 1971.

During the season there were three regular no-hit games pitched and a couple of odd ones. Minnesota's Dean Chance, who held Boston hitless for five innings before rain intervened on August 6, pitched nine innings of hitless ball against Cleveland August 25. The Orioles' Steve Barber pitched 8⅔ hitless innings against Detroit on April 30, but needed the help of Stu Miller for the final out. Although held hitless, Detroit won, 2–1. Don Wilson, a Houston rookie, pitched the only National League no-hitter, against Atlanta on June 18. The final no-hitter of the season was pitched by Joe Horlen of the White Sox, against Detroit September 10.

Individual honors went to Mike McCormick of the Giants and to Lonborg who were voted the Cy Young Awards as the leading pitchers in each league. Roberto Clemente won the National League batting crown for the fourth time, with .357.

The All-Star game at Anaheim, July 11, went a record 15 innings before the National League won, 2–1, on Tony Perez' home run.

Professional—Major Leagues

AMERICAN LEAGUE
(Final Standings, 1967)

	Won	Lost	Pct.
Boston	92	70	.568
Detroit	91	71	.562
Minnesota	91	71	.562
Chicago	89	73	.549
California	84	77	.522
Baltimore	76	85	.472
Washington	76	85	.472
Cleveland	75	87	.463
New York	72	90	.444
Kansas City	62	99	.385

NATIONAL LEAGUE
(Final Standings, 1967)

	Won	Lost	Pct.
St. Louis	101	60	.627
San Francisco	91	71	.562
Chicago	87	74	.540
Cincinnati	87	75	.537
Philadelphia	82	80	.506
Pittsburgh	81	81	.500
Atlanta	77	85	.475
Los Angeles	73	89	.451
Houston	69	93	.426
New York	61	101	.377

World Series—Won by St. Louis Cardinals; paid attendance, 7 games, 304,085; total receipts, $2,350,607.10; commissioner's share, $352,591.08; players' share, $705,878.44, including full shares of $8,314.81 for each Cardinal and $5,115.23 for each Red Sox; each club's share: $323,034.09; each leagues' share, $323,034.09

Standings: St. Louis (NL) won 4, lost 3, pct. .571; Boston (AL) won 3, lost 4, pct. .429

First Game (Fenway Park, October 4): St. Louis 2, Boston 1; *Second Game* (Fenway Park, October 5): Boston 5, St. Louis 0; *Third Game* (Busch Stadium, October 7): St. Louis 5, Boston 2; *Fourth Game* (Busch Stadium, October 8): St. Louis 6, Boston 0; *Fifth Game* (Busch Stadium, October 9): Boston 3, St. Louis 1; *Sixth Game* (Fenway Park, October 11): Boston 8, St. Louis 4; *Seventh Game* (Fenway Park, October 12): St. Louis 7, Boston 2

All-Star Game (Anaheim, Calif. July 11)—National 2; American 1 (15 innings)

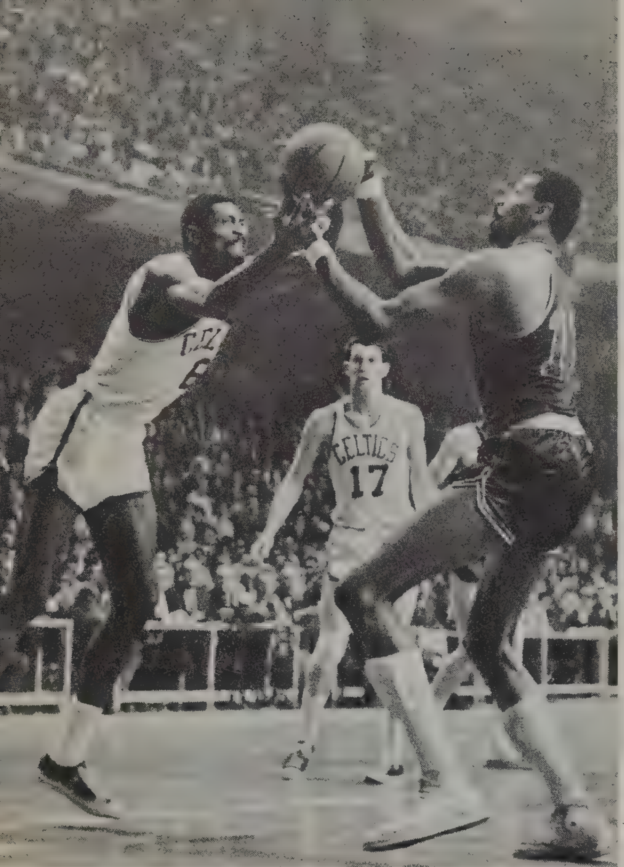
Most Valuable Players—*National:* Orlando Cepeda, St. Louis infielder; *American:* Carl Yastrzemski, Boston outfielder

Cy Young Memorial Award (outstanding pitcher): *American:* Jim Lonborg, Boston (22-9); *National:* Mike McCormick, San Francisco (22-10)

Rookies of the Year—*American:* Rod Carew, Minnesota infielder; *National:* Tom Seaver, New York pitcher

Leading Batters: percentage—*American:* Carl Yastrzemski, Boston .326; *National:* Roberto Clemente, Pittsburgh .357. Home Runs—*American:* Harmon Killebrew, Minnesota, and Carl Yastrzemski, Boston, 44; *National:* Henry Aaron, Atlanta, 39. Runs Batted In—*American:* Carl Yastrzemski, Boston, 121; *National:* Orlando Cepeda, St. Louis, 111

Leading Pitchers: best percentage (10 or more victories)—*American:* José Santiago, Boston (12-4) .750; *National:* Nelson Briles, St. Louis (14-5) .737. Most Victories—*American:* Jim Lonborg, Boston, and Earl Wilson, Detroit, 22; *National:* Mike McCormick, San Francisco, 22. Earned Run Average—*American:* Joel Horlen, Chicago, 2.06; *National:* Phil Niekro, Atlanta, 1.87


UPI

WILT CHAMBERLAIN (*right*) of the Philadelphia 76ers and Coach Bill Russell of the Boston Celtics fight for possession of the ball during the 1967 NBA play-offs in April.

Professional—Minor Leagues

(When two teams are named, the first team won the regular season championship and the second won the play-off; otherwise, the team named won both. Letters in parentheses indicate league class.)

International (AAA)—Richmond, Toledo
Pacific Coast (AAA)—San Diego (Eastern Division and play-off); Spokane (Western Division)
Mexican Southeast (AAA)—Campeche
Eastern (AA)—Binghamton (Eastern Division and play-off); Elmira (Western Division)
Mexican (AA)—Jalisco (no play-off)
Southern (AA)—Birmingham (no play-off)
Texas (AA)—Albuquerque (no play-off)
California (A)—San Jose (first half and play-off); Modesto (second half)
Carolina (A)—Raleigh (Eastern Division); Durham (Western Division and play-off)
Florida State (A)—Orlando (Eastern Division); St. Petersburg (Western Division and play-off)
Mexican Center (A)—Leon (no play-off)
Midwest (A)—Wisconsin Rapids (first half); Appleton (second half and play-off)
New York-Pennsylvania (A)—Auburn (no play-off)
Northern (A)—St. Cloud (no play-off)
Northwest (A)—Medford (no play-off)
Western Carolinas (A)—Spartanburg (no play-off)
Appalachian (Rookie)—Bluefield (no play-off)
Gulf Coast (Rookie)—Athletics (no play-off)
Pioneer (Rookie—Ogden (no play-off)

Other Champions

All-American Amateur—Baltimore
American Legion—Tuscaloosa, Ala.
Babe Ruth League—New Orleans
Colt League—Hagerstown, Md.
Connie Mack League—Long Beach, Calif.
Dixie Youth—Hartsville, S. C.
Little League World Series—West Tokyo, Japan
Little League Seniors—Westbury, N. Y.
National Amateur Federation—Detroit
National Baseball Congress—Boulder (Colo.) Collegians
Pony League—Chula Vista, Calif.
Stan Musial League—Chicago National Electric Chiefs
Veterans of Foreign Wars Teeners—West Allis, Wis.

Intercollegiate Champions

NCAA—Arizona State
NAIA—New Mexico Highlands

BASKETBALL

There were a number of revolutions in basketball in 1967. One returned a former champion, the University of California at Los Angeles, to power in the college ranks. A second overthrew the long-reigning Boston Celtics. And a third, undertaken by the players against the club owners, threatened for a time to wipe out the NBA play-offs.

The uprising that enthroned UCLA was expected. It was led by 7-foot, 1⅜-inch Lew Alcindor, the New Yorker who had been the most publicized high school player since Wilt Chamberlain starred in Philadelphia. Lew, with three other sophomores and one junior making up the regular starting team, rolled through some strange opposing defenses and stalling tactics to a perfect season with 30 victories. The Bruins finished the regular season unbeaten in 14 conference games and 26 overall. Then they beat four tournament foes for the National Collegiate Athletic Association championship, routing Dayton, 79–64, in the final at Louisville. It was UCLA's third title in four years.

Led by Chamberlain, the Philadelphia 76ers, who had taken the Eastern Division title from the Celtics in 1966 but failed to win the NBA crown, completed the job this time. They set a mark for regular season victories with 68. They beat Boston, 4 games to one, for the Eastern title and downed the San Francisco Warriors, the Western Division champions, 4 games to 2.

Before the play-offs got under way, however, the players rebelled over what they considered a weak pension plan and threatened to strike unless a more comprehensive system was adopted. The club owners threatened to cancel the play-offs, which would affect the players' salaries. Nevertheless, after a couple of days of bickering, agreement was reached on March 14, with the players claiming victory.

The NBA also had to face another threat with the formation in February of a second major league, the American Basketball Association. The ABA put franchises in 11 cities and began operation in October. At the same time, two new NBA teams, the San Diego Chargers and the Seattle Supersonics, went into action and opened the way for the addition of Phoenix and Milwaukee in 1968.

The new league, headed by George Mikan, a former NBA star, was not successful in recruiting players from the older loop, with the exception of Rick Barry. The San Francisco star, who had led the NBA in scoring with 2,775 points and a 35.6 average per game, agreed to play for the ABA's Oakland team, coached by his father-in-law. The star player was given a contract that was said to yield about $500,000. When a court ruled that Barry could play only for San Francisco in the 1967–68 season, he decided to sit the year out.

In the 1966–67 season, Chamberlain was chosen the most valuable player in the NBA with Dave Bing of Detroit named the outstanding rookie.

Professional
NATIONAL BASKETBALL ASSOCIATION
(Final Standings, 1967)

Eastern Division				Western Division			
	Won	Lost	Pct.		Won	Lost	Pct.
Philadelphia	68	13	.840	San Francisco	44	37	.543
Boston	60	21	.741	St. Louis	39	42	.481
Cincinnati	39	42	.481	Los Angeles	36	45	.444
New York	36	45	.444	Chicago	33	48	.407
Baltimore	20	61	.247	Detroit	30	51	.370

Eastern Division play-offs—Philadelphia defeated Boston, 4 games to 1; *Western Division play-offs*: San Francisco defeated St. Louis, 4 games to 2; *NBA Championship*—Philadelphia defeated San Francisco, 4 games to 2

Most Valuable Player Award—Wilt Chamberlain, Phila. 76ers
Rookie of the Year—Dave Bing, Detroit Pistons
Leading Scorer—Rick Barry, San Francisco Warriors, 2,775 points; 35.6 average per game

Amateur

Major Tournaments

NCAA—University of California, Los Angeles (defeated Dayton, 79–64)
NCAA College Division—Winston-Salem (defeated Southwest Missouri State, 77–74)
National Invitation (New York)—Southern Illinois (defeated Marquette, 71–56)
National Intercollegiate (NAIA)—St. Benedict's, Atchison, Kans. (defeated Oklahoma Baptist, 71–65)
Men's AAU—Akron (Ohio) Goodyear Wingfoots (defeated Phillips 66ers, Bartlesville, Okla., 77–62)
Women's AAU—Nashville (Tenn.) Business College (defeated Raytown (Mo.) Piperettes, 47–39)

College Conference Champions

(Figures in parentheses represent victories and losses in conference games only.)

Athletic Association of Western Universities—University of California at Los Angeles (14–0)
Atlantic Coast—North Carolina (12–2); won championship tournament
Big Eight—Kansas (13–1)
Big Ten—Indiana and Michigan State (10–4); Indiana selected for NCAA tournament
Central Intercollegiate A. A.—Winston-Salem (19–0)
Ivy League—Princeton (13–1)
Mid-American—Toledo (11–1)
Middle Atlantic—University division: Temple (20–8 overall); Northern college division: Wagner (9–1; beat Scranton in play-off); Southern college division: Drexel (11–3)
Missouri Valley—Louisville (12–2)
Ohio Valley—Western Kentucky (13–1)
Southeastern—Tennessee (15–3)
Southern—West Virginia (9–1); won championship tournament
Southwest—Southern Methodist (12–2)
Western Athletic—Brigham Young and Wyoming (8–2); Wyoming won play-off for NCAA berth
West Coast Athletic—Pacific (14–0)
Yankee—Connecticut (9–1)

Leading College Independents

East—Boston College (21–3); St. John's (23–5); Syracuse (20–6); Rutgers (22–7); Providence (12–7)
Middle West—Dayton (25–6); Marquette (21–9)
South—Virginia Tech (20–7); Georgia Tech (17–9)
Southwest—Houston (27–4); U. of Texas at El Paso (22–6)
Rocky Mountain—Utah State (20–6)
Pacific Coast—Seattle (18–8)

BOBSLEDDING

World Championships (Alpe d'Huez, France, February 6–7)—2-*man:* Erwin Thaler (pilot) and Reinhold Durnthaler (brake), Austria (2-heat total, 1:55.54); *4-man:* canceled
AAU Championships (Lake Placid, N. Y., February 18–19)—2-*man:* Gary Sheffield (pilot) and Howard Siler (brake), U. S. Air Force (4-heat total, 4:44.99); *4-man:* William Hickey (pilot), Guy Martineau, Robert Jessey, Paul Savage (brake), Lake Placid Bobsled Club (4-heat total, 4:37.94)
North American Championships, Schaefer Trophy (Lake Placid, February 21–22)—2-*man:* Paul Lamey (pilot) and Bob Huscher (brake), U. S. Navy (4-heat total, 4:50.19); *4-man:* Bob Said (pilot), David Dunn, Bob Crowley, Phil Duprey (brake), Adirondack Bobsled Club (4-heat total, 4:33.14)
National Diamond Trophy (Lake Placid, February 25–26)—2-*man:* Howard Clifton (pilot) and Mickey Luce (brake), Hurricane B. C., Keene, N. Y. (4-heat total, 4:58.56); *4-man:* Said (pilot), Dunn, Crowley, Duprey (brake), Lake Placid, B. C. (4-heat total, 4:33.34)
International Gold Cup (Lake Placid, March 4–5)—2-*man:* Lamey (pilot) and Huscher (brake), U. S. Navy (4-heat total, 5:03.69); *4-man:* Hickey (pilot), Siler, William Dodds, Charles Timm (brake), U. S. Air Force (4-heat total, 4:35.05)

BOWLING

American Bowling Congress Tournament (Miami Beach, Fla., March 4–May 7)—*Regular Division: singles,* Frank Perry, Lorain, Ohio (723 pins); *doubles,* Mark Kuglitsch and Ron Wheeler, Milwaukee (1,357); *all-events,* Gary Lewis, Chicago (2,010); *team,* Pinky's Bowl, Milwaukee (3,327). *Classic Division: singles,* Lou Mandragona, Miami, Fla. (736); *doubles,* Norm Meyers, Los Angeles, and Harry Smith, Redwood City, Calif. (1,422); *all-events,* Bob Strampe, Detroit (2,092); *team,* Balancer Glove, Fort Worth, Tex. (6,298). *Booster Division: team,* Klutzes, Miami, Fla. (2,850)
Women's International Bowling Congress Tournament (Rochester, N. Y., April 13–May 28)—*Division I: singles,* Glorian Paeth, Port Huron, Mich. (652); *doubles,* Elaine Liburdi, Union City, N. J., and Joan Oleske, Lyndhurst, N. J. (1,252); *all-events,* Carol Miller, Milwaukee (1,862); *team,* The Orphans, Los Angeles (2,970). *Division II: singles,* Lillian Royer, Woodlyn, Pa. (613); *doubles,* Ann Schauer and Julia Nungesser, College Point, N. Y. (1,108); *all-events,* Pat Beasley, Lansing, Mich. (1,653); *team,* English's Windy Hill, Ithaca, N. Y. (2,569). *Queen's event:* Mildred Ignizio, Rochester, N. Y.
Bowling Proprietors' Association of America Champions (St. Louis, Mo., May 28, final)—*Men: singles,* Les Schissler, Denver; *Women: singles,* Gloria Bouvia, Portland, Ore. *Team handicap* (Wichita, Kan., August 26–27): North American Van Lines, Anniston, Ala. (9,327)
Professional Bowlers Association Championship (New York, December 10, final)—Dave Davis, Tucson, Ariz.
National Duckpin Bowling Congress Tournament (Newington, Conn., April 1–May 7)—*Men: singles,* Charles Guess, Richmond, Va. (502); *doubles,* Joseph Serapilia, Bristol, Conn., and Tony Fratini, New Haven, Conn. (919); *all-events,* Albert Barnhart, Hagerstown, Md. (1,335); *team,* La Perle's Memorials, Plainfield, Conn. (2064). *Women: singles,* Shirley McAneney, Lowell, Mass. (429); *doubles,* Laura Morgan and Jean Stewart, Baltimore (803); *all-events,* Jean Stewart (1,260); *team,* Holiday Lanes, Manchester, Conn. (1,911). *Mixed doubles:* Wally Lookingland and Selina Conner, Baltimore (884); *mixed teams,* Regent Mixed, Richmond, Va. (1,878)

BOXING

Some of the best battling of the year came in the tussle for profits between boxing promoters and managers after Cassius Clay's heavyweight title was taken from him.

Officials of various boxing commissions declared the heavyweight title vacated in June when Clay refused to be inducted into the U. S. armed services under the Selective Service system. Clay (who calls himself Muhammad Ali) contended that he is a minister in the Black Muslim sect and therefore should not be drafted. He had won two fights earlier in 1967, raising his undefeated record to 29 bouts. He settled the issue over who was the World Boxing Association's champion by outpointing Ernie Terrell in 15 rounds at Houston, February 6. In his final bout on March 22 at New York's Madison Square Garden, Clay knocked out Zora Folley in seven rounds. It was his ninth defense of the title he had won in 1964.

Almost immediately after the dethroning of Clay, an elimination series was set up to provide a new champion. In the first bouts, Jim Ellis (Clay's former sparring partner) stopped Leotis Martin in 9 rounds, and Thad Spencer outpointed Terrell in 12. Oscar Bonavena of Argentina eliminated Karl Mildenberger in Germany, and Jerry Quarry defeated Floyd Patterson, the former champion. In the semi-

HEAVYWEIGHT TITLE that Cassius Clay (Muhammad Ali) defended against Ernie Terrell (*left*) in February was lost in June when he refused induction into the armed services.

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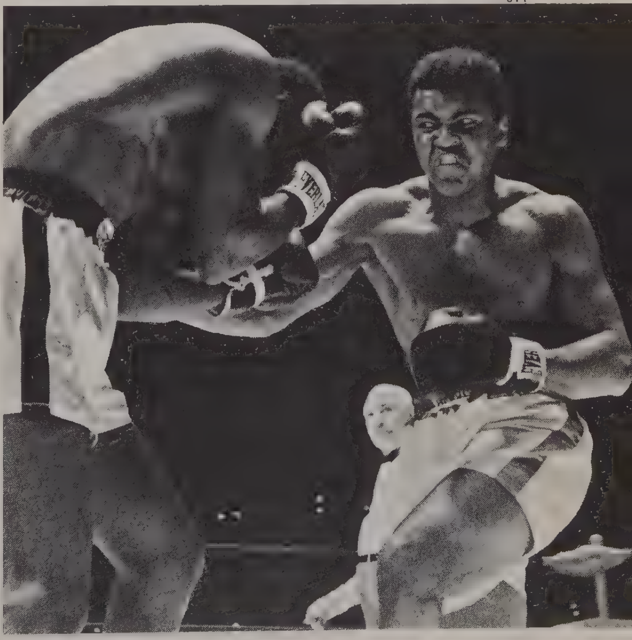

finals, Ellis outpointed Bonavena and qualified to meet the winner of a 1968 bout between Spencer and Quarry for the title. Buster Mathis and Joe Frazier did not enter the competition.

In the most exciting competition in the other classes, Nino Benvenuti of Italy survived a fourth-round knockdown and defeated Emile Griffith for the middleweight title April 17 at Madison Square Garden. But Griffith regained the championship on September 30 at Shea Stadium, New York, by outpointing the Italian.

World Professional Champions

Heavyweight—Vacant (Cassius Clay, Louisville, Ky., was stripped of title in June for refusing induction into U. S. Army)
Light Heavyweight—Dick Tiger, Biafra, Nigeria
Middleweight—Emile Griffith, New York
Junior Middleweight—Kim Ki Soo, South Korea
Welterweight—Curtis Cokes, Dallas
Junior Welterweight—Paul Fuji, Honolulu
Lightweight—Carlos Ortiz, New York
Junior Lightweight—Hiroshi Kabayashi, Japan
Featherweight—Vacant (Vicente Saldivar, Mexico, retired in October)
Bantamweight—Masahiko (Fighting) Harada, Japan
Flyweight—Chartchai Chionoi, Thailand (World Boxing Association—Horacio Accavallo, Argentina)

National AAU Senior Championships
(San Diego, Calif., April 6–8)

106 Pounds—Bennie Gerolaga, Stockton, Calif.
112 Pounds—Roland Miller, Wahpeton, N. Dak.
119 Pounds—Earl Large, Clovis, N. Mex.
125 Pounds—Roy DeFilippis, U. S. Navy
132 Pounds—Roland Harris, Canton, Ohio
139 Pounds—James Wallington, U. S. Army
147 Pounds—Kim Booker, Oakland, Calif.
156 Pounds—Arthur Davis, U. S. Air Force
165 Pounds—Leonard Hutchins, Detroit
178 Pounds—John Griffin, Cleveland
Heavyweight—Forest Ward, New York

BRIDGE, CONTRACT

World Team (Bermuda Bowl) Championship (Miami Beach, Fla., May 26–June 4)—Italy (Walter Avarelli, Giorgio Belladonna, Massimo D'Alelio, Pietro Forquet, Benito Garozzo, Camillo Pabis Ticci; Guido Barbone, nonplaying captain) defeated North America, France, Thailand, and Venezuela

Spring Nationals
(Seattle, March 10–19)

Harold S. Vanderbilt Cup Team—Lew Mathe, Los Angeles; Mike Lawrence, Berkeley; Ron Von der Porten, San Francisco; Lew Stansby, Oakland; G. Robert Nail, Houston; Jim Jacoby, Dallas.
Men's Pairs—Art Price and Richard Lawrence, Ann Arbor, Mich.
Women's Pairs—Terry Michaels, Washington, and Garner McDaniel, Houston, Tex.
Men's Teams—Lawrence Jolma, Portland, Ore.; Gary Stark, Oswego, Ore.; Tom Bussey, Vancouver, Wash.; J. R. Dunlap and J. R. Patterson, Milwaukie, Ore.
Women's Teams—Agnes Gordon, Buffalo; Dorothy Hayden, Hastings-on-Hudson, N. Y.; Margaret Wagar, Atlanta; and Emma Jean Hawes, Ft. Worth, Tex.
Mixed Pairs—Harry Fishbein, New York, and Carol Klar, Houston, Tex.
Open Pairs—Maury Genud and Harvey Cohen, Los Angeles
Individual—Lew Mathe

Summer Nationals
(Montreal, July 28–August 6)

Masters Mixed Teams—Mike and Kathie Cappelletti, Alexandria, Va.; Mike Moss and Gail Shane, New York
Life Master Pairs—Lew Mathe, Los Angeles, and Phil Feldesman, New York
Mixed Pairs—Edgar Kaplan, New York, and Judy Kay, Philadelphia
Women's Pairs—Barbara Tepper and Mrs. Barbara Birnholz, Livingston, N. J.
Men's Pairs—Roy Perry and Olin Sweet, Ray Brook, N. Y.
Master's Knockout Teams (Spingold)—Edgar Kaplan, Alvin Roth, and Bill Root, New York; and Norman Kay, Philadelphia
Individual (Sally Fishbein Trophy)—Phil Feldesman (176.85 pts)

Fall Nationals
(New Orleans, November 24–December 6)

Reisinger Board-a-Match Teams—Alvin Roth, William Root, and Edgar Kaplan, New York; Robert Jordan, Arthur Robinson, and Norman Kay, Philadelphia
Morehead Cup Teams—Michael Becker and Steve Altman, New New York; Dan Rotman and Charles Peres, Chicago
Blue Ribbon Pairs—Sam Kehela and Wolf Lebovic, Toronto
Life Master Men's Pairs—Peter Pender, San Francisco, and Harlow Lewis, Philadelphia
Life Master Women's Pairs—Nancy Gruver and Sue Sachs, Baltimore
Mixed Pairs—Kit Woolsey and Trudy Machlin, Washington

CHESS

World Champions

Men—Tigran Petrosian, USSR
Women—Nona Gaprindashvili, USSR
Junior—Julio Kaplan, Puerto Rico

United States Champions

Men—Bobby Fischer, New York
Women—Mrs. Gisela K. Gresser, New York
Open—Pal Benko, New York
Women's Open—Mrs. Mary Bain, New York
Junior—Sal Matera, New York
Amateur—Ron Lohrman, Penfield, N. Y.
Women's Amateur—Mrs. Rachel Guinan, Philadelphia
National Open—Pal Benko, New York
Women's National Open—Lina Grumette, Los Angeles
American Open—Dr. Anthony Saidy, Los Angeles
Women's American Open—Mrs. Bunny Gerschensohn, Los Angeles

CROSS COUNTRY

AAU (Chicago, November 25, 10,000 meters)—Ken Moore, Oregon Track Club (30:08.7); *team:* Toronto Olympic Club (53 pts)
NCAA: *University division* (Laramie, Wyo., November 27, 6 miles)—Gerry Lindgren, Washington State (30:45.6); *team:* Villanova (91 pts). *College division* (Wheaton, Ill., November 11, 4 miles)—Arjan Gelling, North Dakota (19:33.5); *team:* San Diego State (66 pts)
NAIA (Omaha, Neb., November 25, 4 miles)—John Mason, Fort Hayes State (20:14); *team:* Eastern Michigan (85 pts)
IC4-A (New York, November 20, 5 miles)—*University division:* Arthur Dulong, Holy Cross (24:04.4); *team:* Villanova (24 pts). *College division:* Ambrose Burfoot, Wesleyan (24:25.4); *team:* Springfield (46 pts). *Freshmen* (3 miles): *University division:* Martin Liquori, Villanova (14:20.8); *team:* Georgetown (109 pts). *College division:* Allen Webb, Lafayette (15:30.4); *team:* Iona (77 pts)
U. S. Track and Field Federation (Fort Collins, Colo., November 23, 6 mi 322 yds)—Arjan Gelling, North Dakota (31:58.8); *team:* Cowboy Cross Country Club, Laramie (64 pts)
Women's AAU (Albuquerque, N. Mex., November 25)—Mrs. Vicki Foltz, Falcon (Seattle) Track Club (11:46.65); *team:* Will's Spikettes, Sacramento (26 pts)

CURLING

World Cup (Perth, Scotland)—Scotland (Chuck Hay, skip)
U. S. Men (Winchester, Mass.)—Seattle (Bruce Roberts)
U. S. Women (Chicago)—Utica (N. Y.) Glengarries (Mrs. Connie Storms)
Canadian (Ottawa)—Don Mills C. C., Ontario (Alf Phillips Jr.)
Gordon International Medal (Montreal)—Canada 504, United States 367
Douglas Medal (Hastings-on-Hudson, N. Y.)—St. Andrew's No. 1 (W. Lincoln Seibert)
Dykes Memorial (Philadelphia)—New York Caledonian C. C. (Hal Jasmine)
Gordon Champion Rink (Schenectady, N. Y.)—Schenectady C. C. (Dr. G. W. Graham)
Stockton Cup (Brookline, Mass.)—Winchester C. C. (Dr. J. P. Sheeran)
Winchester Bowl (Winchester, Mass.)—Sherbrooke C. C., Quebec (B. Fuller)

DOG SHOWS

International Kennel Club Show (Chicago, July 22–23)—Group winners (2,696 dogs shown)—*Hound:* Dr. William J. Fritz's and Ronald H. Ruehle's wire-haired dachshund, Ch. Charlamar's Noah W., Carleton, Mich.; *nonsporting:* Cody T. Sickle's bulldog, Ch. Cherokee Morgan, Merrick, N. Y.; *sporting:* Mrs. Fred H. Gasow's English springer spaniel, Ch. Salilyn's Aristocrat, Troy, Mich.; *terrier:* Mr. and Mrs. James A. Farrell Jr.'s Lakeland, Ch. Stingray of Derryabah, Darien, Conn.; *toy:* Mrs. Leslie S. Gordon Jr.'s and Janet E. Bennett's Yorkshire, Ch. Wildweir Fair 'n Square, Glenview, Ill.; *working:* Mary M. Rodgers' Doberman pinscher, Ch. Sultana von Marienburg, Sun Valley, Calif.; *best in show:* Ch. Salilyn's Aristocrat, English springer spaniel
Westminster Kennel Club Show (New York, February 14–15)—Group winners (2,573 dogs shown)—*Hound:* Mrs. Lois R. Boardman's Afghan, Ch. Akaba's Blue Devil, Calabasas, Calif.; *nonsporting:* Alekai Kennel's Alekai Marlaine, Honolulu; *sporting:* Mrs. Fred H. Gasow's English springer spaniel, Ch. Salilyn's Aristocrat, Troy, Mich.; *terrier:* E. H. Stuart's Scottish, Ch. Bardene Bingo, Carnation, Wash.; *toy:* Ina F. Kniffin's Pomeranian, Ch. Leader's Little Buck-A-Roo, Staatsburg, N. Y.; *working:* Serena and Hendrik Van Rensselaer's Old English sheepdog, Ch. Fezziwig Raggedy Andy, Basking Ridge, N. J.; *best in show:* Ch. Bardene Bingo, Scottish terrier

FENCING

World Championships
(Montreal, June 17)

Individual—*foil:* Viktor Poutiatin, USSR; *épée:* Alexei Nikantchikov, USSR; *saber:* Mark Rakita, USSR; *women's foil:* Alexandra Zabelina, Hungary
Team—*foil:* Rumania; *épée:* USSR; *saber:* USSR; *women's foil:* Hungary

United States Championships
(Santa Monica, Calif., June 24–July 1)

Individual—*foil:* Heizaburo Okawa, Los Angeles Fencing Academy; *épée:* Paul Pesthy, New York Athletic Club; *saber:*

UPI

AT THE BOTTOM OF THE HEAP is Green Bay's Bart Starr (15), who has just sneaked across the winning touchdown against Dallas for the NFL championship, December 31.

Alfonso Morales, New York A. C.; *women's foil:* Harriet King, Salle Lucia, San Francisco
Team—*foil:* Los Angeles F. A.; *épée:* Salle Csiszar, Philadelphia; *saber:* New York A. C.; *women's foil:* Salle Vince, Los Angeles

National Collegiate (NCAA) Championships
(Northridge, Calif., March 30–April 1)

Individual—*foil:* Mike Gaylor, New York University; *épée:* George Masin, NYU; *saber:* Todd Makler, Pennsylvania
Team (3 weapon)—NYU (72 pts)
Women's Foil (Hunter College, N. Y., April 7–8)—*individual:* Pat Preziosi, Fairleigh Dickinson; *team:* Cornell

FOOTBALL

College

For the second straight year, the team acclaimed as the college football champion won that honor on the playing field rather than in a poll. The direct confrontation took place on November 18 and the winner, the University of Southern California, gained the Rose Bowl bid as well as the national title. The Trojans defeated the University of California at Los Angeles, 21–20. The losers had been ranked No. 1 and the victors, No. 2, going into the game, which was witnessed by 90,772 and a TV audience of millions.

The USC attack was led by O. J. Simpson (nicknamed Orange Juice), who ran 64 yards for the touchdown that enabled the Trojans to win on Rikki Aldridge's third conversion point. The Bruins were paced by Gary Beban, a quarterback who passed for 301 yards and two touchdowns. Beban, a senior, was voted the Heisman Trophy as the season's outstanding collegiate player; Simpson, a junior, was second in the balloting.

The teams that had battled for the championship in 1966, Notre Dame (the winner) and Michigan State, started badly and were out of contention by the time they played each other on October 18. Notre Dame, upset by Purdue and USC, defeated the Spartans, who had lost to Houston, USC, and Minnesota. Another perennial power, Alabama, was vanquished in the South by Tennessee, which was voted second place in the final polls. The Vols lost only to UCLA, 20–16. San Diego State led the small colleges with a 9–0 record.

Southern California protected its top rating by defeating Indiana of the Big Ten before a record crowd of 102,946 fans in the Rose Bowl, 14–3. In the other New Year's Day contests, Wyoming, the only undefeated major team, was stopped by Louisiana State, 20–13, in the Sugar Bowl; Texas A. and M. upset Alabama, 20–16, in the Cotton Bowl; and Oklahoma edged Tennessee, 26–24, in the Orange Bowl.

Professional

The Baltimore Colts went into the last National Football League game of the season undefeated and came out with nothing to show for their five-months' work but an "A for effort." In that final game, Johnny Unitas, the Colt quarterback, was flattened seven times by the Los Angeles' front four, and the Rams triumphed, 34–10. This decided the league's Coastal Division championship. Los Angeles and Baltimore had identical records, but the Rams won on the basis of total points in two games with the Colts, the first ending in a 24–24 tie.

When the Rams met the Packers for the Western Conference title, however, Roman Gabriel, the quarterback who starred against the Colts, got the same treatment as Unitas, and the old champions won, 28–7. Then in the battle against the Dallas Cowboys for the NFL championship at Green Bay, with the temperature at 13° below zero, the Packers' Bart Starr was even more outstanding than usual in handling the ball in the cold. He guided his team

GREEN BAY COACH Vince Lombardi watches his team's victory over Oakland in the Super Bowl, January 1968. Lombardi later announced his resignation as Packers' coach.

UPI

VINCE LOMBARDI, the taskmaster coach of the Green Bay Packers, directed his charges to the National Football League championship for the third year in a row in 1967, and then humbled the American League team for the second straight year in the Super Bowl.

In nine seasons under the severe regimen of Lombardi, the Packers won the division title six times and the NFL championship five times. In that span they won 89, lost 29, and tied 4 regular season contests and won 8 of 9 post-season title games.

Vincent Thomas Lombardi was born in Brooklyn, N. Y., on June 11, 1913. He played guard on Fordham's famed line ("Seven Blocks of Granite") in the mid-1930's. As coach of offense for Fordham, Army, and the New York Giants, he became a master tactician in ground play. He took over at Green Bay, Wisconsin, in 1959 after the Packers had suffered through their worst season. In January 1968, Lombardi resigned as coach of the Packers but retained the post of general manager.

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downfield in the closing minutes, then carried the ball over from the 1-yard-line on a sneak with 13 seconds left to play for a 21–17 victory. The Cowboys had walloped the Cleveland Browns in the play-off for the Eastern Conference title.

Early in the season Jim Bakken of the St. Louis Cardinals broke all professional football kicking records by booting seven field goals against Pittsburgh on September 24. The previous high was six.

In the American Football League, the Oakland Raiders, an outfit carefully pieced together by Al Davis from other teams' discards and young players, won 13 of their 14 games. In the championship play-off, the Raiders routed the Houston Oilers, 40–7, with Daryl Lamonica, a Buffalo castoff, directing the attack and with an alert and strong defensive platoon.

The Oakland Raiders, however, found the Green Bay Packers' defense, led by Ray Nitschke and Henry Jordan, much too strong in the Super Bowl at warm Miami, Jan. 14, 1968. With Don Chandler kicking four field goals, the Packers won, 33–14, repeating their victory in the first Super Bowl the previous year.

NATIONAL FOOTBALL LEAGUE

(Final Standings, 1967)

Eastern Conference

	Won	Lost	Tied	Pct.	Points For	Points Against
Century Division						
Cleveland	9	5	0	.643	334	297
New York	7	7	0	.500	369	379
St. Louis	6	7	1	.462	333	356
Pittsburgh	4	9	1	.308	281	320
Capitol Division						
Dallas	9	5	0	.643	342	268
Philadelphia	6	7	1	.462	351	409
Washington	5	6	3	.455	347	353
New Orleans	3	11	0	.214	233	379

Conference champion—Dallas (defeated Cleveland, 52-14, at Dallas, December 24).

Western Conference

Central Division						
Green Bay	9	4	1	.692	322	209
Chicago	7	6	1	.538	239	218
Detroit	5	7	2	.417	260	259
Minnesota	3	8	3	.273	233	294
Coastal Division						
*Los Angeles	11	1	2	.917	398	196
Baltimore	11	1	2	.917	394	198
San Francisco	7	7	0	.500	273	337
Atlanta	1	12	1	.077	175	422

* Given top position for outscoring Baltimore in total points in their two games.

Conference champion—Green Bay (defeated Los Angeles, 28–7, at Milwaukee, December 23)

League champion—Green Bay (defeated Dallas, 21–17, at Green Bay, December 31)

AMERICAN FOOTBALL LEAGUE

(Final Standings, 1967)

	Won	Lost	Tied	Pct.	Points For	Points Against
Eastern Division						
Houston	9	4	1	.692	258	199
New York	8	5	1	.615	371	329
Buffalo	4	10	0	.286	237	285
Miami	4	10	0	.286	219	407
Boston	3	10	1	.231	280	389
Western Division						
Oakland	13	1	0	.929	468	233
Kansas City	9	5	0	.643	408	254
San Diego	8	5	1	.615	360	352
Denver	3	11	0	.214	256	409

League champion—Oakland (defeated Houston, 40–7, at Oakland, December 31)

Intercollegiate and Conference Champions

National (AP and UPI polls)—Southern California National Football Foundation Award (McArthur Bowl)—Southern California
Eastern (Lambert Trophy)—Penn State
Eastern Small College—Lambert Cup: West Chester; Lambert Bowl: Wagner
Athletic Association of Western Universities (Pacific Eight)—Southern California (6–1)
Atlantic Coast—Clemson (6–0)
Big Eight—Oklahoma (7–0)
Big Ten—Tie: Indiana, Minnesota, Purdue (6–1)
Central Intercollegiate AA—Morgan State (8–0)
Ivy League—Yale (7–0)
Mid-American—Tie: Ohio and Toledo (5–1)
Middle Atlantic (*University division:* Temple (4–0); *College division; north:* Wilkes (8–0); *south:* Johns Hopkins
Missouri Valley—North Texas (4–0)
Southeastern—Tennessee (6–0)
Southern—West Virginia (4–0–1)
Southwest—Texas A. and M. (6–1)
Western Athletic—Wyoming (5–0)
Yankee—Massachusetts (5–0)
NAIA Championship Bowl (Morgantown, W. Va., December 9)—Fairmont (W. Va.) 28, Eastern Washington 21

Leading Independents

East—Army (8–2), Penn State (8–2), Syracuse (8–2)
South—Florida State (7–2–1), Virginia Tech (7–3)
Midwest—Notre Dame (8–2)
Southwest—West Texas (7–3), Houston (7–3)
Far West—New Mexico State (7–2–1), Utah State (7–2–1)

NCAA Regional Bowls

Grantland Rice (Mideast at Murfreesboro, Tenn., December 9)—Eastern Kentucky 27, Ball State (Ind.) 13
Camelia Bowl (Pacific Coast at Sacramento, Calif., December 9)—San Diego State 27, San Francisco State 6

Tangerine (Atlantic Coast at Orlando, Fla., December 16)—Tennessee (Martin) 25, West Chester State (Pa.) 8
Pecan Bowl (Midwest at Abilene, Tex., December 16)—Texas (Arlington) 13, North Dakota State 0

Major Bowl and All-Star Games
(December 1967, January 1968)

Orange Blossom Classic (Miami, December 2)—Grambling 28, Florida A. & M. 26
Liberty (Memphis, Tenn., December 16)—North Carolina State 14, Georgia 7
Bluebonnet (Houston, Tex., December 23)—Colorado 31, Miami 21
North-South Shrine All-Star (Miami, December 25)—North 24, South 0
Gator (Jacksonville, Fla., December 30)—Penn State 17, Florida State 17
Sun (El Paso, Tex., December 30)—University of Texas at El Paso 14, Mississippi 7
East-West Shrine All-Star (San Francisco, December 30)—East 16, West 14
Blue-Gray All-Star (Montgomery, Ala., December 30)—Blue 22, Gray 16
Cotton (Dallas, January 1)—Texas A. & M. 20, Alabama 16
Orange (Miami, January 1)—Oklahoma 26, Tennessee 24
Rose (Pasadena, Calif., January 1)—Southern California 14, Indiana 3
Sugar (New Orleans, January 1)—Louisiana State 20, Wyoming 13
Hula (Honolulu, January 6)—North 50, South 6
Senior (Mobile, Ala., January 6)—South 34, North 21
Playoff (Miami, January 7)—Los Angeles Rams 30, Cleveland Browns 6
Super (Oakland, Calif., January 14)—Green Bay Packers 33, Oakland Raiders 14
AFL All-Star (Jacksonville, Fla., January 21)—East 25, West 24
NFL Pro (Los Angeles, January 21)—West 38, East 20

Canadian Football League

Grey Cup (Ottawa, December 2)—Hamilton (Ontario) Tiger-Cats (defeated Saskatchewan Roughriders, 24–1)

GOLF

Jack Nicklaus and Arnold Palmer wound up a golf year that they dominated by winning the World Cup for the United States at Mexico City. Nicklaus and Palmer did not win all the tournaments or all the money but their individual earnings on the Professional Golfers' Association tour were over $50,000 more than the third-place finisher, Billy Casper.

Nicklaus, who received the Golfer of the Year Award of the PGA, finished with $188,998 in official earnings. Palmer was right behind with $184,065 and Casper had $129,423, as seven tour golfers went over the $100,000 mark. In unofficial earnings the two leaders neared the $250,000 mark.

In the amateur ranks, Bob Dickson of McAlester, Okla., scored a great double by winning the British and U. S. Amateur titles, a feat that had been accomplished by only three other players. He also helped the United States win the America's Cup against Canada and Mexico and the Walker Cup against Britain.

Nicklaus startled the golf world in the season's first big tournament by failing to qualify for the final two rounds of the Masters, which was won by Gay Brewer with 280. But Nicklaus captured the U. S. Open with a 72-hole score of 275, breaking Ben Hogan's 1948 record by one stroke. Nicklaus, however, failed to retain the British Open title; he finished second by two strokes to Roberto de Vicenzo, of Argentina, who shot a 278.

Nicklaus won two $50,000 competitions in 10 days, taking the Westchester Classic on August 30 and the World Series of Golf on September 10. Palmer's tour victories were at Los Angeles, Tucson, the American Classic, and the Thunderbird. Then he and Nicklaus won the World Cup by 13 strokes. Palmer took the individual honors with a 276, five less than Nicklaus and Bob Charles of New Zealand. Palmer also won the Vardon Trophy, scoring an average per round of 70.88. U. S. pros also retained the Ryder Cup, beating Britain, 23½ to 8½. The PGA title was taken by Don January in an 18-hole play-off with Don Massengale.

American women pro golfers were stunned in July when the U. S. Open title was taken by Catherine Lacoste of France, the daughter of the famed tennis player, René Lacoste. The 22-year-old golfer was the first amateur and the first foreigner to win the Open. Nineteen-year-old Lou Dill of Deer Park, Tex., won the U. S. Amateur. Kathy Whitworth won the Ladies PGA and was high money-winner for the third straight year, with a record $44,004.

Men's Individual Champions

U. S. Open—Jack Nicklaus, Columbus, Ohio
U. S. Amateur—Bob Dickson, McAlester, Okla.
Professional Golfers' Association—Don January, Dallas
Masters—Gay Brewer, Dallas
U. S. Public Links—Verne Callison, Sacramento, Calif.
British Open—Roberto de Vicenzo, Argentina
British Amateur—Bob Dickson
Canadian Open—Billy Casper, Bonitas, Calif.
Canadian Amateur—Stuart Jones, New Zealand
Canadian PGA—George Knudson, Toronto
French Open—Bernard Hunt, Britain
French Amateur—Alexis Godillot, France
American Classic—Arnold Palmer, Latrobe, Pa.
Eastern Amateur—Hal Underwood, Del Rio, Tex.
North-South Amateur—William Campbell, Huntington, W. Va.
Trans-Mississippi—Hal Underwood
Western Amateur—Bob Smith, Sacramento, Calif.
U. S. Senior—Robert Kiersky, Chicago
USGA Senior—Ray Palmer, Grosse Ile, Mich.
USGA Junior—John Crooks, Winston-Salem, N. C.
World Senior Amateur—Cecil Dees, Glendale, Calif.
Carling World Open—Billy Casper

JACK NICKLAUS, who was professional golf's leading money winner in 1967, chips his way out of the rough during British Open tournament at Hoylake, England, in July.

THE TIMES, LONDON

Thunderbird Classic—Arnold Palmer
Tournament of Champions—Frank Beard, Louisville, Ky.
Westchester Classic—Jack Nicklaus
Western Open—Jack Nicklaus
World Series—Jack Nicklaus
PGA Senior—Sam Snead, White Sulphur Springs, W. Va.
World Senior (professional)—John Panton, Scotland
National Collegiate (NCAA)—*University division:* Hale Irwin, Colorado; *college division:* Larry Hinson, East Tennessee
NAIA—John Bohmann, Texas Lutheran

Women's Individual Champions

U. S. Open—Catherine Lacoste (amateur), France
U. S. Amateur—Lou Dill, Deer Park, Tex.
Ladies PGA—Kathy Whitworth, San Antonio, Tex.
British Amateur—Elizabeth Chadwick, England
Canadian Open Amateur—Bridget Jackson, England
Eastern Amateur—Phyllis (Tish) Preuss, Pompano Beach, Fla.
North-South Amateur—Phyllis (Tish) Preuss
Southern Amateur—Mrs. Teddy Boddie, Shreveport, La.
Trans-Mississippi—Jane Bastanchury, North Whittier, Calif.
Western Open—Kathy Whitworth
Western Amateur—Mrs. Dorothy Porter, Riverton, N. J.
World Series—Kathy Whitworth
USGA Senior—Mrs. Marge Mason, Englewood, N. J.
USGA Junior—Elizabeth (Doll) Story, Clayville, N. Y.
National Intercollegiate—Martha Wilkinson, California State

Team Champions

America's Cup (amateur)—United States 14½, Canada 11½, Mexico 10
Ryder Cup (professional)—United States 23½, Britain 8½
Walker Cup (amateur)—United States 13, Britain 7
NCAA—*University division:* Houston; *college division:* Lamar Tech
NAIA—Southwestern Louisiana
World Cup (formerly the Canada Cup)—*First team:* United States, 577; *second:* New Zealand, 570. *Low individual score:* Arnold Palmer, 276

GYMNASTICS

National AAU Championships

(Natchitoches, La., May 4–6)

Men

All Around—Yoshi Hayasaki, Seattle YMCA (110.1 pts)
Long Horse Vault—Sei Ito, Northwestern (La.) State (18.825)
Floor Exercise—Makoto Sakamoto, Southern California (18.95)
Side Horse—Arnold Lascari, Wisconsin (18.575)
Parallel Bars—Yoshi Hayasaki (18.475)
Horizontal Bar—Makato Sakamoto (19.025)
Still Rings—Sei Ito (19.4)
Tumbling—Thomas Prouex, Pasadena, Calif. (17.25)
Trampoline—David Jacobs, Amarillo, Tex. (28.95)
Team—Northwestern (La.) State (32.25 pts)

Women

All-Around—Carolyn Hacker, Southern Connecticut State, New Haven (71.733 pts)
Balance Beam—Carolyn Hacker (18.234)
Uneven Bars—Linda Metheny, Tuscola, Ill. (18.8)
Side Horse—Carolyn Hacker (17.934)
Floor Exercise—Linda Metheny (18.55)
Tumbling—Judy Wills, Southern Illinois (9.0)
Trampoline—Judy Wills (27.95)
Team—Southern Illinois (29.5 pts)

National Collegiate (NCAA) Championships

(Carbondale, Ill., March 31–April 1)

All-Around—Steve Cohen, Penn State (55.75)
Floor Exercise—Dave Jacobs, Michigan (9.45)
Side Horse—Keith McCanless, Iowa (9.6)
Trampoline—Dave Jacobs (9.5)
Horizontal Bar—Rich Grigsby, San Fernando Valley State (9.5)
Long Horse—Paul Mayer, Southern Illinois (9.512)
Parallel Bars—Makato Sakamoto, Southern California (9.525)
Still Rings—Josh Robison, California (9.6)
Team—Southern Illinois (189.55 pts)

HANDBALL

World Championship

4-Wall—*Singles:* Joey Maher, Toronto (defeated Carl Obert, New York, 21–9, 21–9); *team:* tie—United States and Canada

U. S. Handball Association Champions

4-Wall—*Singles:* Paul Haber, San Francisco; *doubles:* Jim Jacobs and Marty Decatur, New York; *masters doubles:* Ken Schneider and Gus Lewis, Chicago
3-Wall—*Singles:* Carl Obert; *doubles:* Carl and Ruby Obert, New York; *masters doubles:* John Scopis and Al August, Detroit
1-Wall—*Singles:* Steve Sandler, New York; *doubles:* Artie Reyer, Massapequa, N. Y., and Joe Danilczyk, Brooklyn; *masters doubles:* Meyer Selbst and Ted Russell, Brooklyn

National AAU Champions

4-Wall—*Singles:* Carl Obert; *doubles:* Oscar and Ruby Obert, New York
1-Wall—*Singles:* Steve Sandler; *doubles:* Carl and Ruby Obert; *masters doubles:* Ray Gersten and Julie Stack, New York

National YMCA Champions

4-Wall—*Singles:* Bill Yambrick, St. Paul

Canadian Champions

4-Wall—*Open singles:* Paul Haber, San Francisco; *closed singles:* Joey Maher, Toronto

HARNESS RACING

Nevele Pride, a nifty trotter who cost his owner only $20,000, made his first campaign such a successful one that he wound up as the Harness Horse of the Year. The colt, the first 2-year-old to gain that distinction, won 26 of 29 races, earned a record for his age of $222,923, and set a world mark of 1:58 ⅖ for a mile by 2-year-olds. He was trained and driven by Stanley Dancer.

Second to Nevele Pride in the overall voting and the top pacer was Romulus Hanover. The biggest earner of the year with $277,636, he won 15 of 21 races, including the $178,064 Messenger, the $85,510 Adios, and the $50,000 Centennial in Montreal. He was trained and handled by Bill Haughton, whose charges won over $1.5 million in 1967.

Romulus' older brother, Romeo Hanover, continued his successful career until he developed a feverish ankle late in November and was retired. Bought for $8,500 as a yearling, Romeo won 36 of 44 races and $658,505, the fifth highest among the harness horses. He had a 21-race winning streak until beaten in June by Adios Vic at Yonkers.

The Hambletonian trot was won in two heats by Speedy Streak, the Yonkers Futurity by Pomp, and the Dexter Cup by Flamboyant. The winners of the other two "triple crown" paces (in addition to the Messenger) were Meadow Paige in the Cane and Best of All in the Little Brown Jug in three heats.

U. S. Trotting Association Champions

Trotters

2-Year-Old—Nevele Pride
3-Year-Old—Flamboyant
4-Year-Old—Carlisle
Aged—Perfect Freight

Pacers

2-Year-Old—Fulla Napoleon
3-Year-Old—Romulus Hanover
4-Year-Old—Romeo Hanover
Aged—Easy Prom

Harness Horse of the Year

Nevele Pride (108 votes), Romulus Hanover (58), Fulla Napoleon (10)

Major Stakes Winners

Trotting

American Classic—Grandpa Jim
American National—Carlisle
American Trotting Championship—Perfect Freight
Dexter Cup—Flamboyant
Gotham—Roquepine (France)
Hambletonian—Speedy Streak
Harriman—Nevele Pride
Hilltop—Carlisle
Horseman Futurity (2-year-old)—Nevele Pride
Kentucky Futurity—Speed Model
Realization—Carlisle
Roosevelt International—Roquepine
United Nations—Perfect Freight
Westbury Futurity—Nevele Pride
Yonkers Futurity—Pomp

Pacing

Adios—Romulus Hanover
American Classic—Easy Prom
American National—Song Cycle
Cane Futurity—Meadow Paige
Centennial (Canada)—Romulus Hanover
Fox—Golden Money Maker
Illinois Colt (2-year-old)—John L. Purdue
Little Brown Jug—Best of All
Messenger—Romulus Hanover
National Championship—Adios Vic
National Derby—True Duane
Realization—Romeo Hanover
Sheppard—Fulla Napoleon
Roosevelt Futurity—Fulla Napoleon
Yonkers International—Romeo Hanover

HOCKEY

After 40 years the Chicago Black Hawks finally won the National Hockey League championship. But in the play-offs the star-studded Hawks faltered again, and the Stanley Cup went to Toronto.

The Black Hawks, made up in the last six years of some of the game's finest players, had for some reason been unable to win the crucial games that

UPI

DAVE KEON (14) of the Toronto Maple Leafs breaks up a Montreal attack on goalie Terry Sawchuk during the 1967 Stanley Cup finals. Toronto won the classic, 4 games to 2.

led to the league title or possession of the Stanley Cup. But in the 1966–67 campaign, with Stan Mikita and Bobby Hull setting the offensive pace and Glenn Hall and Denis DeJordy guarding the goal, Chicago overpowered the rest of the league.

The Black Hawks broke a tie for first place with the surprising New York Rangers on January 19, and then, with a streak of 15 unbeaten games until the Rangers stopped them on February 19, they built up a big lead. The Hawks won the league race by 17 points over Montreal, and their players took most of the honors.

Mikita led in scoring with 97 points on 35 goals and a record 62 assists. His total points equaled Hull's 1966 mark. The 27-year-old center was the first to win three awards in one season: the Hart Trophy as the most valuable player, the Ross Trophy as the leading scorer, and the Lady Byng Trophy for sportsmanship. Hull, who was second in scoring, led in goals with 52. Hall and DeJordy shared the Vezina Trophy as the most proficient goal tenders.

The Maple Leafs, who lost 10 straight games and then won 10 straight, achieved a splendid combination of older players with speedy and explosive young men. They jolted the Black Hawks out of the play-offs, 4 games to 2, and then won the Cup by the same margin over Montreal, which had ousted the Rangers in 4 games. Starring for the the Leafs at goal were 37-year-old Terry Sawchuk, who registered his 100th shutout during regular season play, and 43-year old Johnny Bower.

When play reopened in October, the new West Division of expansion teams was activated. The new clubs, stocked by players drafted in June, were the Los Angeles Kings, Minnesota North Stars, Oakland Seals, Philadelphia Flyers, Pittsburgh Penguins, and St. Louis Blues.

NATIONAL HOCKEY LEAGUE

(Final Standings, 1967)

Team	Won	Lost	Tied	Goals For	Goals Against	Points
Chicago	41	17	12	264	170	94
Montreal	32	25	13	202	188	77
Toronto	32	27	11	204	211	75
New York	30	28	12	188	189	72
Detroit	27	39	4	212	241	58
Boston	17	43	10	182	253	44

Stanley Cup Play-Offs

Semifinals—Toronto defeated Chicago, 4 games to 2; Montreal defeated New York, 4 games to 0
Final—Toronto defeated Montreal, 4 games to 2

Individual National Hockey League Awards

Hart Trophy (most valuable player)—Stan Mikita, Chicago
Ross Trophy (leading scorer)—Stan Mikita
Norris Trophy (leading defenseman)—Harry Howell, New York
Lady Byng Trophy (sportsmanship)—Stan Mikita
Calder Trophy (outstanding rookie)—Bobby Orr, Boston
Vezina Trophy (fewest goals scored against)—Denis DeJordy and Glenn Hall, Chicago

NHL All-Star Teams

(Players are selected by writers and broadcasters in NHL cities. NHL pays $1,000 to each final first team member and $500 to each second team man.)

Position	First Team	Second Team
Goal	Ed Giacomin, New York	Glenn Hall, Chicago
Defense	Pierre Pilote, Chicago	Tim Horton, Toronto
Defense	Harry Howell, New York	Bobby Orr, Boston
Center	Stan Mikita, Chicago	Norm Ullman, Detroit
R. Wing	Ken Wharram, Chicago	Gordie Howe, Detroit
L. Wing	Bobby Hull, Chicago	Don Marshall, New York

Other Professional Champions

American League—*Eastern division:* Hershey; *Western division and Calder Cup play-offs:* Pittsburgh
Western League—*Regular season:* Portland; *play-offs:* Seattle
Central League—*Regular season and play-offs:* Oklahoma City

Amateur Champions

World (Vienna, March 18–29)—USSR (7–0)
Eastern League—*Northern division:* Clinton; *Southern division and play-offs:* Nashville
International League—*Regular season:* Dayton; *play-offs:* Toledo
United States League—*Regular season:* Waterloo; *play-offs:* Marquette
Amateur Hockey Association of the U. S.—*Senior:* Berlin (N. H.) Maroons; *intermediate:* St. Cloud (Minn.) Rockets; *junior:* Boston Cubs; *juvenile:* Detroit Burton Title; *midget:* Marblehead (Mass.) Maroons; *bantam:* Detroit Teamsters; *pee wee:* Braintree (Mass.) All Stars

United States Intercollegiate

NCAA—Cornell (defeated Boston University in final, 4–1)
ECAC—Cornell (defeated Boston University in final, 4–3)
WCHA—North Dakota (defeated Denver in final, 3–2)
Ivy League—Cornell (9–1)

Canadian

Allan Cup (senior)—Drummondville Eagles
Memorial Cup (junior)—Toronto Marlboros

HORSE RACING

In a showdown for Horse of the Year honors, Damascus, a Kentucky-bred 3-year-old, ran away from famed Buckpasser, the 1966 champion, and Dr. Fager, a front-running colt that had set track records in his previous two races. This race occurred in the Woodward Stakes (1¼ miles) at Aqueduct on September 30. Buckpasser carried 126 pounds, 6 pounds more than the other two favorites.

Damascus, ridden by Bill Shoemaker, whipped past Dr. Fager (who had set too fast a pace) after three quarters of a mile and scurried to a 10-length victory over Buckpasser. The latter overtook Dr. Fager in the stretch. The victory enabled Damascus to take the year's top honors. The big colt, owned by Mrs. Edith W. Bancroft and carrying the Belair colors of her father, the late William Woodward, failed badly only once—in the Kentucky Derby. Made nervous, so his trainer said, by the noisy crowd but favored in the betting, Damascus ran third to Darby Dan Farm's Proud Clarion, ridden by Bob Ussery, with Barb's Delight second. However, in the other two races that make up the triple-crown series, Damascus took the Preakness by 2¼ lengths and the Belmont by 2½. Altogether, Damascus won 12 of 16 races earning $817,941, a record for one year.

After the Woodward, Buckpasser was retired because of an arthritic condition in his right front hoof. His record for 1967 was three victories in six races, with earnings of $224,840. This gave him a total of $1,462,014, the third highest ever earned by a thoroughbred. Buckpasser, who won 25 of 31 races in three years, had been syndicated for a record $4,800,000; Ogden Phipps retained half of the shares.

Dr. Fager finished the season with no awards but with $484,194 in earnings. Phipps' stable claimed both of the awards for juveniles with offspring of the famed Bold Ruler. Vitriolic won the honors for colts and Queen of the Stage for fillies. Fort Marcy, who beat Damascus in the Washington (D. C.) International grass race, was named turf champion. William Haggin Perry's Gamely, another daughter of Bold Ruler, won 3-year-old filly honors, nosing out Mrs. E. K. Thomas' Furl Sail.

In addition to Shoemaker and Braulio Baeza, who rode Buckpasser and Dr. Fager, other jockeys had outstanding seasons. Ussery became the 10th American rider to pass the 3,000 mark in victories; and Jorge Velasquez was the third jockey to ride over 400 winners in a season.

Thoroughbred Racing Association Champions

American Champion—Damascus
Older Horse—Buckpasser
Older Filly or Mare—Straight Deal
3-Year-Old Colt—Damascus
3-Year-Old Filly—Gamely
2-Year-Old Colt—Vitriolic
2-Year-Old Filly—Queen of the Stage
Steeplechase—Quick Pitch
Turf—Fort Marcy

Stakes Winners

American Derby (Arlington)—Damascus
Amory L. Haskell Handicap (Monmouth)—Handsome Boy
Aqueduct Futurity—Captain's Gig
Aqueduct Stakes—Damascus
Arlington Classic—Dr. Fager
Arlington Lassie—Shenow
Arlington-Washington Futurity—*First division:* T. V. Commercial; *second division:* Vitriolic
Benjamin Lindheimer Handicap (Arlington)—Fusilier Boy
Belmont Stakes (Aqueduct)—Damascus
Brook Steeplechase Handicap (Aqueduct)—Bragado II
Brooklyn Handicap (Aqueduct)—Handsome Boy
Californian (Hollywood)—Biggs
Champagne Stakes (Aqueduct)—Vitriolic
Coaching Club American Oaks (Aqueduct)—Quillo Queen
Delaware Handicap—Straight Deal
Delaware Oaks—Lewiston
Del Mar Futurity—Baffle
Flamingo (Hialeah)—Reflected Glory
Florida Derby (Gulfstream)—In Reality
Frizette (Aqueduct)—Queen of the Stage
Garden State Stakes—Bugged
Gardenia (Garden State)—Gay Matelda
Grand National Steeplechase (Aqueduct)—Golpista
Gulfstream Handicap—Pretense
Hawthorne Gold Cup—Dr. Fager
Hialeah Turf Cup—War Censor
Hollywood Derby—Tumble Wind
Hollywood Gold Cup—Native Diver
Hollywood Juvenile—Jim White
Hollywood Lassie—Morgaise
Hopeful (Saratoga)—What A Pleasure
Jersey Derby (Garden State)—In Reality
Jockey Club Gold Cup (Aqueduct)—Damascus
John B. Campbell Handicap (Bowie)—Quinta
Kentucky Derby (Churchill Downs)—Proud Clarion
Man o' War Handicap (Aqueduct)—Ruffled Feathers
Matron (Aqueduct)—Queen of the Stage
Metropolitan Handicap (Aqueduct)—Buckpasser
Michigan 1⅛-Mile (Detroit)—Estreno II
Mother Goose Stakes (Aqueduct)—Furl Sail
New Hampshire Sweepstakes—Dr. Fager
Pimlico-Laurel Futurity (Pimlico)—Vitriolic
Preakness (Pimlico)—Damascus
San Juan Capistrano (Santa Anita)—Niarkos
Santa Anita Derby—Ruken
Santa Anita Handicap—Pretense
Sapling (Monmouth)—Subpet
Saratoga National Hurdles—Roublet
Sorority (Monmouth)—Queen of the Stage
Selima (Laurel)—Syrian Sea
Strub (Santa Anita)—Drin
Suburban Handicap (Aqueduct)—Buckpasser
Sunset Handicap (Hollywood Park)—Hill Clown
Temple Gwathmey Steeplechase (Aqueduct)—Bampton Castle
Travers (Saratoga)—Damascus
United Nations Handicap (Atlantic City)—Flit-To
Washington D. C. International (Laurel)—Fort Marcy
Washington Park Handicap (Arlington)—Handsome Boy
Whitney (Saratoga)—Stupendous
Widener (Hialeah)—Ring Twice
Wood Memorial (Aqueduct)—Damascus
Woodward Stakes (Aqueduct)—Damascus

Foreign Races

Cambridgeshire (Newmarket, England)—Lacquer
Canadian International (Woodbine)—He's A Smoothie
Canadian Derby (Northlands)—Gilmore
Epsom Derby (England)—Royal Palace
Epsom Oaks (England)—Pia
Grand National Steeplechase (England)—Foinavon
Grand Prix de Paris (Longchamp)—Phaeton
Irish Derby (Ireland)—Ribocco
King George VI and Queen Elizabeth (England)—Busted
Melbourne Cup (Australia)—Red Handed
1,000 Guineas (England)—Fleet
Prix de l'Arc de Triomphe (France)—Topyo
Queen's Plate (Canada)—Jammed Lovely
St. Leger (England)—Ribocco
Two Thousand Guineas (England)—Royal Palace
British Champion—Busted
Canadian Champion—He's A Smoothie

HORSE SHOWS

American Horse Show Association

High-Score Winners

Amateur 3-Gaited Saddle Horse—Dr. and Mrs. David Schneider's Genius of Camelot, Cleveland
Open 3-Gaited Saddle Horse—Arthur Cohn's Lady of Honors, New Castle, Pa.
Junior 3-Gaited Saddle Horse—Robert Wentz' Personality's Gidget, Leola, Pa.
Amateur 5-Gaited Saddle Horse—Mr. and Mrs. Alan R. Robson's The American Model, West Chester, Pa.
Open 5-Gaited Saddle Horse—Mrs. F. D. Sinclair's The Tempest, Tulsa
Open Fine Harness—Mr. and Mrs. Robson's Shamrock Sensation
Amateur Fine Harness—Mrs. Sinclair's Supreme Airs
Hackney Pony—Mrs. Lydia Pederson's King's Rhythmette, Caledonia, Ill.
Harness Pony—Mrs. Pederson's King's Glamour Girl
Roadster—Dr. J. Lowell Hammond's Empire Jim, Ridgecrest, Calif.
Arabian—W. H. Hawn's Que Mira, Corpus Christi, Tex.
Morgan—Mrs. Mary H. DeWitt's A-Okay, Dalton, Pa.
Parade—Mr. and Mrs. Daniel E. Cohn's Charlemagne, Beverly Hills, Calif.
Tennessee Walking—Cebern Lee's Society Souvenir, Oaks Corner, N. Y.
Trail—Ada M. Brown's Taffy, Lafayette, Calif.
Stock—C. W. Neill's Linda Scotland, San Luis Rey, Calif.
Western Pleasure—Col. Lloyd G. Hanley's Leo Grande, Woodland Hills, Calif.

Green Conformation Hunter—Cismont Manor Farm's Showdown, Keswick, Va.
Regular Conformation Hunter—Mrs. A. C. Randolph's Quiet Flite, Uppersville, Va.
Green Working Hunter—Robert L. Chamberlain 3d's Early Star, New Canaan, Conn.
Regular Working Hunter—Peggy Steinman's Not Always, Lancaster, Pa.
Amateur Owner Hunter—Deborah Willson's Rapid Rise, Bloomfield Hills, Mich.
Junior Hunter—Kip Rosenthal's Goodboy Dee, Briarcliff Manor, N. Y.
Small Pony Hunter—Nancy Baroody's Midget, Lakeville, Conn.
Large Pony Hunter—Deborah Cahn's Prim 'n Proper, Pikesville, Md.
Green Jumper—Mr. and Mrs. Harry Gill's Up Tight, Collegeville, Pa.
Open Jumper—Mr. and Mrs. Gill's Gustavus
Amateur Owner Jumper—Sue Peverly's San Miguel, Greenwich, Conn.
Junior Jumper—Jacquie Zuccaro's Easy Money, Oradell, N. J.
Shetland Harness Pony—Karen L. Olsen's Hi-Hoof's Mack Cody, Tulsa
Shetland Roadster—A. C. Buehler's Fernwood's Frisco Lee, Chicago
Welsh Pleasure Pony--Mrs. J. Austin du Pont's Liseter Frolic, Newtown Square, Pa.

Equestrian Championships

Saddle Seat (at Louisville)—Judy Fisher, Muncie, Ind.
Hunter Seat (at Bloomfield Hills, Mich.)—Conrad Homfeld, Houston, Tex.
Stock Seat (at Santa Barbara, Calif.)—Tim Whitney, Montecito, Calif.
Dressage (at Bloomfield Hills)—Michael Kierkegaard, Stewartstown, Pa.

National Horse Show Awards

NHS (Good Hands, Saddle Seat Trophy)—Andrea Walton, La Porte, Ind.
ASPCA (Maclay Trophy, Hunter Seat)—Conrad Homfeld
3-Day Championships—*Open:* Jim Wofford, Somerville, N. J.; *intermediate:* Anne Alexandre, Far Hills, N. J.

ICE SKATING

Figure Skating

World Championships

Vienna, Austria, February 28–March 4

Men—Emmerich Danzer, Austria
Ladies—Peggy Fleming, United States
Pairs—Ljudmila Belousova and Oleg Protopopov, USSR
Dance—Diane Towler and Bernard Ford, Britain

North American Championships

Montreal, Februray 10–12

Men—Donald Knight, Dundas, Ont.
Ladies—Peggy Fleming, Colorado Springs, Colo.
Pairs—Cynthia and Ronald Kauffman, Seattle
Dance—Lorna Dyer and John Carrell, Seattle

United States Championships

Omaha, January 18–21

Men's Senior—Gary Visconti, Detroit
Ladies' Senior—Peggy Fleming
Senior Pairs—Cynthia and Ronald Kauffman
Dance (Gold)—Lorna Dyer and John Carrell

Canadian Championships

Toronto, January 27–29

Men's Senior—Donald Knight
Ladies' Senior—Valerie Jones, Toronto
Senior Pairs—Betty and John McKilligan, Vancouver
Senior Dance—Joni Graham and Don Phillips, Vancouver

Speed Skating

World Championships

Men

(Oslo, Norway, February 11–12)

All-Around—Kees Verkerk, Netherlands (178.058 pts)
500 Meters—Keiichi Suzuki, Japan (0:40.9)
1,500 Meters—Ard Schenk, Netherlands (2:09.1)
5,000 Meters—Kees Verkerk (7:30.4)
10,000 Meters—Kees Verkerk (15:51.7)

Women

(Deventer, Netherlands, February 18–19)

All-Around—Stien Kaiser, Netherlands (195.384 pts)
500 Meters—Mary Meyers, United States (0:46)
1,000 Meters—Stien Kaiser (1:36.2)
1,500 Meters—Stien Kaiser (2:23)
3,000 Meters—Stien Kaiser (5:18.7)

United States Outdoor

(St. Paul, Minn., January 28–29)

Senior Men

All-Around—Mike Passarella, Chicago (14 pts)
220 Yards—Neil Blatchford, Northbrook, Ill. (0:17.9)
440 Yards—John Wurster, Ballston Spa, N. Y. (0:34.4)
880 Yards—Mike Passarella (1:16.3)
¾-Mile—Mike Passarella (1:50.7)
Mile—Bill Lanigan, New York (2:40.3)
2-Mile—Rich Wurster, Ballston Spa, N. Y. (5:36.9)
5-Mile—Bob Fenn, St. Paul (14:49.7)

Senior Women

All-Around—Jeanne Ashworth, Lake Placid, N. Y. (19 pts)
220 Yards—Jeanne Ashworth (0:20.3)
440 Yards—Jeanne Ashworth (0:39.3)
880 Yards—Diane White, St. Paul (1:26.2)
¾-Mile—Diane White (2:05.1)
Mile—Diane White (2:54)

United States Indoor

(Champaign, Ill., March 11–12)

Senior Men

All-Around—Bill Lanigan (20 pts)
440 Yards—John Wurster (0:38.1)
880 Yards—Pat Maxwell, Rochester, N. Y. (1:17.7)
¾-Mile—Bill Lanigan (2:02.9)
Mile—Bill Lanigan (2:55.2)
2 Miles—Bill Lanigan (5:44.5)

Senior Women

All-Around—Sally Blatchford, Northbrook, Ill. (20 pts)
440 Yards—Sally Blatchford (0:42.3)
880 Yards—Sally Blatchford (1:28.4)
¾-Mile—Sally Blatchford (2:15.8)
Mile—Sally Blatchford (3:07.8)
U. S. Open Outdoor (Lake Placid, N. Y., February 4–5) *All-Around* (men and women)—John Wurster (19 pts) and Jeanne Ashworth (25 pts)
U. S. Open Indoor (St. Louis, March 4–5) *All-Around* (men and women): Buddy Campbell, Paramount, Calif. (16 pts) and Sally Blatchford (15 pts)

LACROSSE

National Intercollegiate Champion (Wilgate Trophy)—Tie: Johns Hopkins, Maryland, and Navy
Ivy League Champion—Princeton
National Open—Mt. Washington Club, Baltimore
All-Star Game—North 7, South 5
Division Champions—*Ranked teams* (Miller): Johns Hopkins, Maryland, and Navy; *Northeast* (Taylor): Amherst; *Mid-Atlantic* (Moore): Swarthmore; *Midwest* (Hixson): Denison; Southern (Strobhar): Washington College; *New York* (Cox): Hobart and Syracuse; *New York State* (Morrill): Cortland State; *New York Metropolitan Area* (Lydecker): Adelphi and Fairleigh Dickinson
World—Mt. Washington Club

MOTORBOATING

Major Trophy Winners

Atomic Cup (Pasco, Wash.)—Miss Bardahl, Seattle (driver, Billy Schumacher)
British Columbia Cup (Kelowna, B. C.)—Miss Budweiser, Tampa, Fla. (Mike Thomas)
Gold Cup (Seattle)—Miss Bardahl
Governor's Cup (Madison, Ind.)—Miss Bardahl
Sacramento Cup (Sacramento, Calif.)—Miss Bardahl
San Diego Cup (San Diego, Calif.)—Miss Bardahl
Seafair Trophy (Seattle)—Miss Chrysler Crew, Owensboro, Ky. (Mira Slovak)
Sun Coast Cup (Tampa, Fla.)—Miss Bardahl
World Cup (Detroit)—Miss Chrysler Crew (Bill Sterett)
Unlimited High-Point Champion—Miss Bardahl (Schumacher)

Distance Races

Bahamas 500—Odell Lewis, Fond du Lac, Wis.
Cowes-Torquay (198 miles)—Charles and Jimmy Gardner, England
Gateway Marathon Eastward (102 miles)—Bill Wishnick, New York
Gateway Marathon Westward (154 miles)—Allan Brown, Miami
Hudson River Marathon (250 miles)—Stanton Stauffer and Ed Counts, Ashland, Ohio
Long Beach-San Francisco (440 miles)—Odell Lewis
Long Island Marathon (253 miles)—Dick Genth, Miami
Miami-Nassau (185 miles)—Brown
Sam Griffith Memorial (172 miles)—Bill Sirois, Miami
Viareggio-Bastia (165 miles)—Lewis Merrick, Alliance, Ohio
High-Point Champion—Don Aronow, Miami
International High-Point Champion—Aronow

Predicted Log Trophies

APBA High Point Award—Milton Horwitz, Chicago
Motor Yacht Trophy—William A. Schwarz Jr.
International Team Trophy—Ocean Reef Yacht Club, N. Y. (Vincent Hall, Harriet Sayre)
Express Cruiser—George E. Shaw
James Craig Trophy—Frank Ruppert

PAN-AMERICAN GAMES

The overall results in the Fifth Pan-American Games, held in Winnipeg, Manitoba, from July 23 to August 6, were pretty much what had been expected—an overwhelming collection of gold medals by U. S. athletes. The games were opened by Prince Philip, and 2,454 athletes participated. The attendance of 456,058 paid $903,464 to see the games.

U. S. athletes (on a squad of 401) gathered 120 of the 171 gold medals for first-place finishes, 63 silver medals for second place, and 42 bronze medals for third place. They achieved these rewards competing in 22 sports against the best athletes of 27 other Western Hemisphere nations. Only in soccer did the U. S. team fail to win a medal.

As usual, the U. S. track and field squad paced the nation's victories. The men won 22 of 24 events and the women 8 of 11. Much to the chagrin of many fans and competitors, several of the celebrated U. S. stars—such as Jim Ryun, Gerry Lindgren, and Tommie Smith—were not on the squad. They were resting for other meets. Henry Jerome won the 100-meter dash and Andrew Boychuk, the marathon. Both are Canadians.

However, the biggest headlines were made by the swimmers, who shattered all Pan-American Games records and bettered 13 listed world marks while reveling in the new $2.9 million pool Winnipeg had built for the competitions. The U. S. men won 14 of the 17 finals, the U. S. women 14 of 16.

One Canadian girl, 16-year-old Elaine Tanner of Vancouver, joined the U. S. swimmers in the assault on world records. She broke the marks for the 100- and 200-meter backstroke. Debbie Meyer of Sacramento, Calif., shattered 400- and 800-meter freestyle records; Claudia Kolb of Santa Clara, Calif., lowered the marks for the 200- and 400-meter medley; and Mark Spitz, a high school mate of Miss Kolb's, broke the 100- and 200-meter butterfly marks. Spitz also swam on three winning relay teams for a total of five gold medals. Miss Kolb and Catie Ball of Jacksonville, who set a world mark in the 100-meter breaststroke, each won three.

U. S. wrestlers posted the best mark of all. They won all 33 of their bouts and all eight championships. The baseball team won the title for the first time, beating Cuba twice in the final series. In rowing, the United States won all races except the single sculls, which went to Albert Demiddi of Argentina. Harvard's crew won the 8-oared race.

U. S. athletes also won the championship in men's basketball (for the fifth straight time), men's and women's volleyball, and water polo. The marksmen won 11 of 12 shooting events; the gymnasts, led by Linda Metheny with five gold medals, won 8 of 12 events; and the weightlifters, 5 of 7.

Other team titles went to Argentina in field hockey, Mexico in soccer, Brazil in women's basketball and the Prix de Nations equestrian event, and Chile in equestrian dressage. The individual equestrian title was taken by Jimmy Day of Canada. Cuban boxers won three titles and those from Argentina won two. In judo, Brazil's entries took two gold medals, as did Canada's representatives. In cycling, in which the United States failed to win a gold medal, Roger Gibbon won two for Trinidad and Tobago and Argentine riders won three. Individual fencing honors were shared by Brazil, Argentina, and Mexico. Jack Keane won a medal for the United States in saber.

Final Medal Standings

	Gold	Silver	Bronze
United States	120	63	42
Canada	12	37	43
Brazil	11	10	5
Argentina	9	14	11
Cuba	8	14	23
Mexico	5	14	24
Trinidad and Tobago	2	2	3
Venezuela	1	4	5
Colombia	1	2	5
Puerto Rico	1	1	4
Chile	1	1	3
Peru	0	2	1
Uruguay	0	1	4
Panama	0	1	3
Ecuador	0	1	2
Bermuda	0	1	1
Barbados	0	1	0
Jamaica	0	0	3
Guyana	0	0	1
Netherlands Antilles	0	0	1

PARACHUTING

National Championships

(Tahlequah, Okla., July 1–7)

Men—*Overall:* Roy Johnson, Warren, Ohio (898.9 pts); *accuracy:* Floyd Glover, Tempe, Ariz. (748.4); *style:* Roy Johnson (490)
Women—*Overall:* Mrs. Susan Joerns, Houston, Tex. (692.1); *accuracy:* Mrs. Pat Hallman, Norristown, Pa. (327.4); *style:* Susan Joerns (470)

U. S. Team Selections

Men—Roy Johnson, Floyd Glover; Gene Thacker (Ft. Bragg, N. C.), and Eric Bahor (Sharon, Pa.)
Women—Susan Joerns, Pat Hallman; Martha Huddleston (Stephenville, Tex.), and Karen Roach (Washington, D. C.)

POLO

National Open—Bunntyco-Oakbrook, Ill. (Del Carroll, Ray Harrington, Jack Murphy, Dick Bunn) 8, Milwaukee, 2
National 20-Goal—Milwaukee (Walter Hayden, Benny Guttierez, Harold Barry, Robert Uihlein) 11, Keswick Blue Ridge, Va., 7
National 16-Goal—St. Louis (Steve Orthwein, Peter Orthwein, Benny Guttierez, Dolph Orthwein) 9, Milwaukee, 8
National 12-Goal—San Antonio Vaqueros (Norman Brink, Luis Ramos, Bob Beveridge, Floyd Heinz) 6, Iraan, Tex., 5
National Intercircuit—Wichita, Kan. (Jim Donaldson, Tom Waymen, Bill Waymen, Ted McDermand) 7, Dallas, 5
National Intercollegiate (indoor)—Yale (Sandy Carden, Steve Orthwein, Peter Gerard) 12, Cornell, 11

RODEO

Rodeo Cowboys Association Champions

All-Around—Larry Mahan, Brooks, Ore.
Saddle Bronc Riding—Shawn Davis, Whitehall, Mont.
Bareback Bronc Riding—Clyde Vamvoras, Burkburnette, Tex.
Bull Riding—Larry Mahan
Calf Roping—Glen Franklin, House, N. M.
Steer Wrestling—Roy Duvall, Boynton, Okla.
Team Roping—Joe Glenn, Phoenix, Ariz.

ROWING

North American Championships

(St. Catharines, Ont., August 10–13;
all events at 2,000 meters)

Single Sculls—Niels Secher, Denmark (7:41.39)
Double Sculls—Switzerland (6:55.35)
Pairs with coxswain—The Netherlands (7:49.9)
Pairs without coxswain—Tony Johnson and Larry Hough, Potomac B. C., Washington, D. C. (7:31.47)
Fours with coxswain—Australia (7:02.69)
Fours without coxswain—West Germany (6:46.41)
Eights—New Zealand (6:02.41)

United States Championships

(Philadelphia, August 25–27;
all events except dashes at 2,000 meters)

150-Pound Singles—John Sonberg, New York A. C. (7:49)
150-Pound Quarter-Mile—Tom Henwood, Vesper B. C., Philadelphia (1:19.6)
Association Singles—John Nunn, Long Beach (Calif.) R. A. (7:21.9)
Quarter-Mile Dash—John Van Blom, Long Beach R. A. (1:13.4)
Single Sculls—William Maher, Detroit B. C. (6:50)
Double Sculls—Nunn and Van Blom, Long Beach R. A. (7:33.2)
Pairs without coxswain—Tony Johnson and Larry Hough, Potomac B. C., Washington, D. C. (6:36.6)
Pairs with coxswain—Johnson, Hough, and Jim Storie, Potomac B. C. (7:14.8)
Fours without coxswain—Vesper B. C. (6:37.9)
Fours with coxswain—New Zealand National Crew (6:32)
Quadruple Sculls—Fairmont R. A., Philadelphia (6:30.6)
150-Pound Double Sculls—Larry and Tom Klecatsky, Minnesota B. C., St. Paul (6:54)
150-Pound Fours with coxswain—Argonaut R. C., Toronto (6:58.4)
150-Pound Quadruple Sculls—Vesper B. C. (6:39.6)
150-Pound Eights—Penn Athletic Club, Philadelphia (6:00)
Intermediate Fours with coxswain—Detroit B. C. (6:35.5)
Intermediate Eights—Vesper B. C. (6:14.8)
Heavyweight Eights—New Zealand (5:43.7)
Team (Barnes Trophy)—Vesper B. C. (135 pts)

Intercollegiate Team Champions

IRA Regatta (Syracuse, N. Y., June 17)—*Varsity* (3 mi): Pennsylvania (16:13.9)
Eastern Association (Worcester, Mass., May 13)—*Varsity* (2,000 meters): Harvard (6:06.2)
Harvard-Yale—Harvard (4 mi, 22:43.4)
Metropolitan New York Intercollegiates—Iona (2,000 meters, 6:42.8)
Mid-America Regatta (Marietta, Ohio, May 6)—*Varsity:* Marietta (2,000 meters, 5:49.6)
Oxford-Cambridge—Oxford (4¼ mi, 18:52)
School (national)—St. Joseph's Prep., Buffalo (1 mi, 5:18)
Washington-California—Washington (3 mi, 14:19.1)
Western Sprints (Long Beach, Calif., May 20)—*Varsity:* UCLA (6:15.2)

American Henley

(Worcester, Mass., June 10;
all events except dashes at 2,000 meters)

Singles (Farragut Cup)—James Dietz, New York A. C. (7:42)

Quarter-Mile Dash—James Dietz (1:12.5)
Doubles—Doug Clark and Leif Gotfredsen, Argonaut B. C., Toronto (7:12)
Pairs without coxswain—Steve Jordan and Ted Kakas, Union B. C., Boston (7:37)
Fours without coxswain—Harvard (6:48)
Fours with coxswain—Vesper B. C., Philadelphia (6:47)
Eights (Franklin Cup)—Cornell (6:15.8)
Eights—Vesper B. C. (6:04.2)

British Henley

(Henley-on-Thames, June 28–July 1;
all races at one mile, 550 yards)

Diamond Sculls (singles)—Martin Studach, Switzerland (8:27)
Double Sculls—Grasshopper Club, Zurich (7:47)
Silver Goblets (pairs)—Manfred Gelpe and Klaus Jacob, S. C. Einheit, Dresden (8:18)
Prince Philip Cup (fours with coxswain)—A. S. K. Vorwarts, Rostock, East Germany (7:39)
Stewards Challenge Cup (fours without coxswain)—S. G. Dynamo, Potsdam, East Germany (7:31)
Princess Elizabeth Cup (schoolboy eights)—Eton (7:03)
Thames Challenge Cup (lightweight eights)—Cornell (7:06)
Grand Challenge Cup (eights)—S. C. Wissenschaft, Leipzig, East Germany (6:46)

Canadian Henley

(St. Catharines, Ont., July 19–22)

Single Sculls—James Dietz, New York A. C. (6:56.4)
Quarter-Mile Dash—James Dietz (1:43.6)
Association Singles—James Dietz (7:21.4)
Double Sculls—Sandy Killen and Bob Arlett, New York A. C. (6:44.2)
Pairs without coxswain—Jim Eich and Charles Doyle, New York A. C. (6:58.8)
Eights—Vancouver (British Columbia) R. C. (5:37.2)

SHOOTING

National Rifle and Pistol Championships

(Camp Perry, Ohio, August 3–September 1)

Pistol

3-Weapon Aggregate—William B. Blankenship, Jr., U. S. Army (2,632-122X); *civilian:* John Johnson, Fullerton, Calif. (2,600-106X); *women:* Sallie L. E. Carroll, U. S. Army (2,537-73X); *police:* Elwyn M. Burnett, Holt, Mich. (2,621-113X); *team:* U. S. Army Gray (3,441-124X)

Smallbore Rifle

4-Position—Gary L. Anderson, National Guard, Alameda, Calif. (3,171-205X); *civilian:* Christopher Bowles, (3,134-175X); *women:* Margaret L. Thompson, U. S. Army (3,127-138X)

High-Power Rifle

Bolt (7-match aggregate)—Middleton W. Tompkins, Long Beach, Calif. (1,554-38X); *women:* Miralotte S. Ickes, Berkeley, Calif. (1,466-30X); *senior:* Edward S. Ridge, Trevose, Pa. (1,492-23X); *junior:* Terry D. Malham, Tulsa, Okla. (1,531-41X)
Service (7-Match aggregate)—James R. Bowen, U. S. Marines (1,546-38X); *civilian:* Joseph L. Stemp, Tiffin, Ohio (1,520-37X); *women:* Barbara J. Hile, U. S. Army (1,515-30X); *senior:* Howard A. Wagner, Cheyenne, Wyo. (1,491-26X); *junior:* Peter W. Kippie, Tacoma, Wash. (1,501-29X); *Army:* Arpail J. Gapol (1,540-36X); *Navy:* Bernhard Pfefferkorn (1,532-33X)

Trap

Grand American Championships
(Vandalia, Ohio, August 21–26)

Grand American Handicap—*Men:* Herman Welch, Downers Grove, Ill. (100 at 20½ yards); *women:* Mary Lou Hvizdos, Uniontown, Pa. (97 at 20½); *juniors:* Jeff Philipbar, Verbank, N. Y. (98 at 21) won shoot-off from Jim Burke, Los Alamitos, Calif. (98 at 20); *veterans:* Jewell Davis, Hamilton, Mo. (98 at 20½); *industry:* Cliff Doughman, Alton, Ill. (97 at 27) won shoot-off from Lee Davidson, Tipp City, Ohio (97 at 27)
Champion of Champions—*Men:* Sonny Hewes, Miami, Fla., (100x100) won shoot-off from Edgar Kyle, Colorado Springs (100x100); *women:* Loral I. Delaney, Anoka, Minn. (99x100)
High Overall—*Men:* Larry Gravestock, Amarillo, Tex. (976x1,000); *women:* Loral I. Delaney (946x1,000); *junior:* Doug Bedwell, Brazil, Ind. (965x1,000); *veteran:* Albert Peterson, Virginia, Ill. (942x1,000); *industry:* Bob Oxsen, Ft. Wayne, Ind. (966x1,000)
All-Around—*Men:* Ed Lake, Dublin, Ohio (390x400) won shoot-off from Eddie Leavendusky, Kansas City, Kan. (390x400); *women:* Elizabeth Hantel, Los Alamos, N. M. (378x400); *junior:* Doug Bedwell (384x400); *veteran:* John Downes, Houston, Tex. (374x400); *industry:* R. L. Andrews Jr., Atlanta (389x400)
Clay Target—*Men:* Ernest Havlicek, Pomona, Calif. (200x200); *women:* Punkin Flock, Miami, Fla. (193x200)
Doubles—*Men:* Chris Bishop, Leawood, Kan. (100x100); *women:* Gail Pierson, Natchitoches, La. (98x100)

Skeet

National Skeet Shooting Association Championships
(Savannah, Ga., July 29–August 5)

All-Around—*Open:* James A. Bellows, Lackland AFB (546x550, 4-gun aggregate); *ladies:* Mrs. Valerie Johnson, San Antonio, Tex. (527x550); *veterans:* Otto J. Meyer, Los Angeles (532x550); *senior:* Ted V. Hannaford, Warren, Mich. (539x550); *sub-senior:* Alex H. Kerr, Beverly Hills, Calif. (540x550); *junior:* Steve Pakis, Hot Springs, Ark. (541x550); *industry:* Barney C. Hartman, St. Lambert, Quebec (543x550); *wheelchair:* O. Fred Aiken, Warwick, R. I. (518x550)
Other Individual champions—*12-gauge:* James A. Bellows (250x250); *ladies:* Mrs. William H. Muchnic, Atchison, Kan. (248x250); *20-gauge:* Richard A. Rowden, Jr., Lackland AFB (100x100); *ladies:* Mrs. Julia Armour, Coral Gables, Fla. (99x100); *28-gauge:* Kerr C. Arey, Danville, Va. (100x100); *ladies:* Julia Armour (100x100); *.410-gauge:* Jimmy Prall, Lackland AFB (100x100); *ladies:* Mrs. Sallie Durbin, Kirkwood, Mo. (93x100)
Teams—*Two-man:* Jack E. Johnson and Cecil H. Trammell, Lackland AFB (1087x1100); *five-man:* USAF Blues, Lackland AFB (Richard A. Rowden Jr., Earl F. Herring, Jack E. Johnson, Cecil H. Trammell, and James A. Bellows, 2714x2750)
Champion of Champions—Kenny Barnes Jr., Bakersfield, Calif. (99x100)

SKIING

World Cup-Individual Championships

Men—Jean-Claude Killy, France (225 pts); *women:* Nancy Greene, Rossland, B. C., Canada (176 pts)

World Series of Skiing

(Vail, Colo., March 16–17)

Alpine—*Slalom: men:* Jean-Claude Killy (1:47.9); *women:* Marielle Goitschel, France (1:36.1); *Giant slalom: men:* Jean-Claude Killy (1:26.17); *women:* Nancy Greene (1:47.7); *Downhill: men:* Jean-Claude Killy (2:08.58); *women:* Erika Schinegger, Austria (2:07.44). *Team champion:* France (231 pts)

North American Championships

(Franconia, N. H., March 10–12)

Alpine—*Slalom: men:* Jean-Claude Killy (1:28.15); *women:* Marielle Goitschel (1:26:22); *Downhill: men:* Jean-Claude Killy (1:29:03); *women:* Isabelle Mir, France (1:28.74); *Giant slalom: men:* Jean-Claude Killy (1:35.63); *women:* Christine Beranger, France (1:18.18); *Combined: men:* Jean-Claude Killy (0.00 FIS pts); *women:* Isabelle Mir (37.10 pts)

United States Championships

Alpine (Missoula, Mont., February 24–26)—*Men: slalom:* Jim Heuga, Tahoe City, Calif. (1:38.24); *Giant slalom:* Dumeng Giovanoli, Switzerland (1:28.68); *Downhill:* Dennis McCoy, Bishop, Calif. (1:42.14); *combined:* Dumeng Giovanoli (27.29 pts). *Women: slalom:* Penny McCoy, Bishop, Calif. (1:39.94); *giant slalom:* Sandra Shellworth, Boise, Idaho (1:55.75); *Downhill:* Nancy Greene, Rossland, B. C. (2:01.66); *combined:* Karen Budge, Jackson, Wyo. (42.82 pts)
Nordic—*15-kilometer cross country* (Williamstown, Mass., February 17): James Miller, Durango, Colo. (54:32); *jump:* (Brattleboro, Vt., February 19) John Bower, Auburn, Maine (265.7 pts); *combined:* John Bower (500.25 pts)
Jumping (Leavenworth, Wash., February 5)—Gene Kotlarek, Duluth, Minn. (216.7 pts)
Cross Country (Durango, Colo., January 26 and 28)—*30 kilometers:* Mike Gallagher, Killington, Vt. (1:19.46); *15 kilometers:* Mike Gallagher (49:07)
Biathlon (Marquette, Mich., January 23)—William S. Spencer, Salt Lake City (1:51.10)

National Collegiate (NCAA) Championships

(Kingfield, Me., March 2–4)

Alpine—*Slalom:* Rick Chaffee, Denver (81.96 sec.); *team:* Denver University (98.7 pts); *downhill:* Dennis McCoy, Denver (2:11.2); *team:* Denver University (99.1 pts); *combined:* Terje Overland, Denver (265.83 sec); *team:* Denver University (195.1)
Nordic—*Cross Country:* Ned Gillette, Dartmouth (1:04.07); team: Dartmouth (97.4 pts); *jump:* Bjorn Loken, Utah (213.5 pts); *team:* Denver University (96 pts); *combined:* Matz Jenssen, Utah (430.5 pts); *team:* Wyoming (186.6 pts)
Skimeister (all events award)—Matz Jenssen (365.2 pts)
Team Champion—Denver University (376.7 pts)

SOCCER

A major effort to sell soccer to U. S. sports fans was hamstrung at the start by a battle between two groups of promoters. One, the United Soccer Association (USA), had the official sanction of the International Federation of Football Associations through the United States Soccer Football Association, the governing body in the United States. The other, the National Professional Soccer League (NPSL), operated as an "outlaw" group. However, to avoid a second costly year, the two organizations merged in December 1967 into a 20-team association of two divisions.

The 1967 attendance for the 73 games of the 12-city USA was 568,118, an average of 7,782 a game. In the NPSL, which operated in 10 cities, 775,846 fans saw its 159 regular season games, an average of 4,866 a game. These gates, although disappointing to the soccer sponsors, were, however, comparable to the attendance for most of the teams in the third and fourth divisions of the English League.

NATIONAL PROFESSIONAL SOCCER LEAGUE

(Final Standings, 1967)

Eastern Division

					Goals	
	Won	Lost	Tied	Pts	For	Against
Baltimore	14	9	9	162	53	47
Philadelphia	14	9	9	157	53	43
New York	11	13	8	143	60	58
Atlanta	10	12	9	135	51	46
Pittsburgh	10	14	7	132	59	74

Western Division

					Goals	
	Won	Lost	Tied	Pts	For	Against
Oakland	19	8	5	185	64	34
St. Louis	14	11	7	156	54	57
Chicago	10	11	11	142	50	55
Toronto	10	17	5	127	59	70
Los Angeles	7	15	10	113	42	61

(Point scoring: 6 points for victory, 3 for tie, one bonus point for each of first 3 goals in game.) Championship play-offs (2 games, total goals to decide)—September 3 at Baltimore: Baltimore 1, Oakland 0; September 9 at Oakland: Oakland 4, Baltimore 1. Oakland wins title, 4 goals to 2.

UNITED SOCCER ASSOCIATION

(Final Standings, 1967)

Eastern Division

					Goals	
	Won	Lost	Tied	Pts	For	Against
Washington	5	2	5	15	19	11
Cleveland	5	3	4	14	19	13
Toronto	4	3	5	13	23	17
Detroit	3	3	6	12	11	18
New York	2	4	6	10	15	17
Boston	2	7	3	7	12	26
Western Division						
Los Angeles	5	2	5	15	21	14
San Francisco	5	4	3	13	25	19
Chicago	3	2	7	13	20	14
Houston	4	4	4	12	19	18
Vancouver	3	4	5	11	20	28
Dallas	3	6	3	9	14	23

(Point scoring: 2 points for victory, 1 for tie.) Championship play-off (at Los Angeles)—Los Angeles 6, Washington 5 (overtime)

United States Amateur Champions

National Challenge Cup—New York Greek Americans
National Amateur Cup—Hartford Italian Americans
National Junior Cup—Lighthouse 49ers, Philadelphia
Intercollegiate (NCAA)—Tie: Michigan State and St. Louis University (scoreless game called after 22 minutes of play on waterlogged field)

SOFTBALL

Amateur Softball Association Champions

Men—Aurora (Ill.) Sealmasters
Women—Raybestos Brakettes, Stratford, Conn.
Slow Pitch (open)—Jim's Sport Shop, Pittsburgh
Slow Pitch (industrial)—Grumman Aircraft, Bethpage, N. Y.
Slow Pitch (women)—Ridge Maintenance, Cleveland
Slow Pitch (16-inch)—Sobies, Chicago

SQUASH RACQUETS

Singles—Sam Howe, Haverford, Pa.
Veterans' Singles—Henri Salaun, Boston
Professional—Mohibullah Khan, Boston
Intercollegiate—Anil Nayar, Harvard
Men's Doubles—Sam Howe and William Danforth, Pittsburgh
Men's Senior Doubles—Ed Hahn, Detroit, and Howard Davis, Elizabeth, N. J.
Women's Singles—Mrs. Newton Meade Jr., Cynwyd, Pa.
Women's Doubles—Mrs. Charles Classen, Haverford, Pa., and Mrs. Francis A. C. Vosters, Jr., Wilmington, Del.
Women's Senior Singles—Betty Shellenberger, Philadelphia
Women's Senior Doubles—Mrs. Classen and Mrs. Vosters
Team—Quebec
Canadian Singles—Sam Howe
Canadian Doubles—Sam Howe and William Danforth
North American Open Singles—Ralph Howe, Locust Valley, N. Y.
Intercollegiate Team—Harvard
Lapham Cup—Canada
Grant Cup—United States

SURFING

International Championships

(At Makaha Beach, Hawaii, Dec. 23, 1967–Jan. 1, 1968)

Men—Joey Cabell, Outrigger Canoe Club, Honolulu
Junior Men—Reno Abellira, Kui-O-Hawaii Surf Team
Women—Martha Sunn, Makaha Surfing Association
Tandem—Bob Moore and Patti Young, Honolulu

United States Championships

(At Huntington Beach, Calif., September 25)

All-Around—Corky Carroll, Dana Point, Calif.
Men—Corky Carroll
Women—Joyce Hoffman, Capistrano Beach, Calif.
Juniors—Dru Harrison, Hermosa Beach, Calif.
Seniors—Bob Holland, Virginia Beach, Va.
Tandem—Don Hansen and Diana Bolton, Cardiff, Calif.

SWIMMING

World swimming records were washed out in waves in 1967, most of them generated every time U. S. swimmers jumped into a pool for a major meet. In many cases the record had hardly been entered as pending before it had been surpassed.

The swimmers warmed up for the record assaults in the indoor meets held in pools less than 50 meters (55 yards) long and thus not acceptable for world records. In the NCAA championships, 10 listed U. S. records were bettered. Two weeks later at the men's AAU meet, four of the new marks and two older ones were eclipsed. Then the amazing teenaged girls set 12 U. S. marks in the women's AAU meet.

Early in July in the larger pools, the assault on world standards began. At an invitation meet at Santa Clara, Calif., eight marks fell. In the Pan-American Games, U. S. swimmers accounted for 11 of the 13 listed world records bettered at Winnipeg. Immediately afterward, at the AAU outdoor championships, the men broke four listed world marks and the girls broke eight. More marks fell at the World University Games in Tokyo and at several European meets.

One of the times posted in the AAU meet was an incredible 17 minutes, 50.2 seconds for the 1,500-meter freestyle. It was achieved by 15-year-old Debbie Meyer of Sacramento, who lowered the record by 22.9 seconds. She also set world marks for the 400-meter freestyle in 4:29, the 800-meter in 9:22.9, and 880-yard in 9:44.1.

The other girl record-breakers were Claudia Kolb with 2:25 in the 200-meter medley and 5:08.2 in the 400; Catie Ball in the 100-meter breaststroke in 1:14.6 and the 200 in 2:39.5; Pam Kruse with 2:09.7 in the 200-meter freestyle; and Elaine Tanner, a Canadian, in the 100- and 200-meter backstrokes with 1:07.1 and 2:24.4 (Pan-American Games).

U. S. male record-breakers were Ken Walsh in the 100-meter freestyle in 52.6 seconds; Don Schollander in the 200-meter freestyle in 1:55.7; Greg Charlton with 4:08.2 in the 400-meter freestyle; 17-year-old Mark Spitz in the 100-meter butterfly in 55.7 and the 200-meter in 2:05.7, regaining the record from John Ferris who did 2:06; Charles Hickcox in the 100-meter backstroke in 59.1 and 200 in 2:09.4; Greg Buckingham in the medley 200 in 2:11.3; and Mike Burton in the 1,500-meter freestyle in 16:34.1.

In European meets, Ada Kok of the Netherlands swam the 200-meter butterfly in a record 2:21; Francis Luyce of France did 8:42 for the 800-meter freestyle; and Roland Matthes of East Germany covered the 100-meter backstroke in 58.4 and ended the record-breaking in November with 2:07.9 in the 200-meter backstroke.

Men's National AAU Outdoor Championships

(Oak Park, Ill., August 11–13)

100-Meter Freestyle—Don Schollander, Santa Clara (Calif.) Swim Club (0:53.3)
200-Meter Freestyle—Don Schollander (1:55.7)
400-Meter Freestyle—Greg Charlton, Santa Clara S. C. (4:09.8)
1,500-Meter Freestyle—Mike Burton, Arden Hills Swim Club, Sacramento, Calif. (16:34.1)
100-Meter Breaststroke—Ken Merten, Los Angeles Athletic Club (1:08.9)
200-Meter Breaststroke—Ken Merten (2:30.8)
100-Meter Butterfly—Mark Spitz, Santa Clara S. C. (0:56.7)
200-Meter Butterfly—Mark Spitz (2:06.4)
100-Meter Backstroke—Charles Hickcox, Indiana Aquatic Club, Bloomington (0:59.7)
200-Meter Backstroke—Charles Hickcox (2:12.3)
200-Meter Medley—Greg Buckingham, Santa Clara S. C. (2:11.3)
400-Meter Medley—Peter Williams, Spartan S. C., East Lansing, Mich. (4:50.8)
400-Meter Freestyle Relay—Los Angeles A. C. (Ross Kidder, Bob Boag, Zachary Zorn, Don Havens, 3:36.4)

400-Meter Medley Relay—Santa Clara S. C. (Fred Haywood, Wayne Anderson, Mark Spitz, Don Schollander, 3:59.7)
800-Meter Freestyle Relay—Santa Clara S. C. (Gary Ilman, Mike Wall, Mark Spitz, Don Schollander, 7:52.1)
One-Meter Dive—Jim Henry, Indiana Aquatic Club (489.85 pts)
Three-Meter Dive—Keith Russell, Dick Smith Swim Gym, Phoenix, Ariz. (557.10)
Platform Dive—Keith Russell (576.95)
Team—Santa Clara S. C. (208 pts)

Women's National AAU Outdoor Championships
(Philadelphia, August 18–20)

100-Meter Freestyle—Jane Barkman, Vesper Boat Club, Philadelphia (0:59.8)
200-Meter Freestyle—Pam Kruse, Fort Lauderdale (Fla.) S. C. (2:09.7)
400-Meter Freestyle—Debbie Meyer, Arden Hills Swim Club, Sacramento, Calif. (4:29)
1,500-Meter Freestyle—Debbie Meyer (17:50.2)
100-Meter Butterfly—Ellie Daniel, Vesper B. C. (1:05.7)
200-Meter Butterfly—Toni Hewitt, Corona Del Mar (Calif.) S. C. (2:23.6)
100-Meter Backstroke—Kendis Moore, Arizona Desert Rats, Scottsdale (1:09.2)
200-Meter Backstroke—Kendis Moore (2:28.1)
100-Meter Breaststroke—Catie Ball, Jacksonville, Fla. (1:14.6)
200-Meter Breaststroke—Catie Ball (2:39.5)
200-Meter Medley—Claudia Kolb, Santa Clara S. C. (2:25)
400-Meter Medley—Claudia Kolb (5:08.2)
400-Meter Freestyle Relay—Santa Clara S. C. (Linda Gustavson, Nancy Ryan, Laura Fritz, Pokey Watson, 4:03.5)
400-Meter Medley Relay—Santa Clara S. C. (Watson, Claudia Kolb, Lee Davis, Gustavson, 4:34.6)
800-Meter Freestyle Relay—Santa Clara S. C. (Gustavson, Ryan, Watson, Kolb, 8:53)
One-Meter Dive—Lt. Micki King, U. S. Air Force (407.80)
Three-Meter Dive—Lt. Micki King (466.9)
Platform Dive—Lesley Bush, Princeton, N. J. (377.10)
Team—Santa Clara S. C. (203 pts)

Men's AAU Indoor Championships
(Dallas, Tex., April 6–8)

100-Yard Freestyle—Donald Havens, Southern California (0:46)
200-Yard Freestyle—Don Schollander, Yale (1:41.2)
500-Yard Freestyle—Mike Burton, UCLA (4:37)
1,650-Yard Freestyle—Mike Burton (16:08)
100-Yard Breaststroke—Ken Merten, Southern Methodist (0:58.9)
200-Yard Breaststroke—Ken Merten (2:10.4)
100-Yard Butterfly—Mark Spitz, Santa Clara Swim Club (0:49.9)
200-Yard Butterfly—Mark Spitz (1:50.6)
100-Yard Backstroke—Fred Haywood, Santa Clara S. C. (0:52.6)
200-Yard Backstroke—Mark Mader, Southern California Freshmen (1:54.4)
200-Yard Individual Medley—Bill Utley, Indiana (1:55.9)
400-Yard Individual Medley—Dick Roth, Santa Clara S. C. (4:09.5)
400-Yard Medley Relay—Santa Clara S. C. (Jim Malley, Bob Momsen, Luis Nicolao, Billy Meyer, 3:30.4)
400-Yard Freestyle Relay—Yale (Robert Waples, Michael Ahern, Doug Kennedy, Don Schollander, 3:06.6)
800-Yard Freestyle Relay—Yale (Dick Schneider, Kennedy, Waples, Schollander, 6:56.2)
Team—Santa Clara S. C. (65 pts)

Women's AAU Indoor Championships
(Fairview Park, Ohio, April 13–15)

100-Yard Freestyle—Erika Bricker, Visalia, Calif. (0:53.3)
200-Yard Freestyle—Pokey Watson, Santa Clara Swim Club, (1:54.1)
500-Yard Freestyle—Pam Kruse, Fort Lauderdale Swim Association (5:06.9)
1,650-Yard Freestyle—Debbie Meyer, Arden Hills Swim Club, (17:38.1)
100-Yard Backstroke—Kaye Hall, Tacoma (Wash.) Swim Club (1:01.6)
200-Yard Backstroke—Kendis Moore, Arizona Desert Rats, Phoenix (2:10.2)
100-Yard Breaststroke—Catie Ball, Jacksonville, Fla. (1:06.6)
200-Yard Breaststroke—Catie Ball (2:25.3)
100-Yard Butterfly—Lee Davis, Saratoga, Calif. (0:58.4)
200-Yard Butterfly—Lee Davis (2:07.9)
200-Yard Individual Medley—Claudia Kolb, Santa Clara S. C. (2:09.7)
400-Yard Individual Medley—Sue Pederson, Arden Hills S. C. (4:37)
400-Yard Freestyle Relay—Santa Clara S. C. (Linda Gustavson, Nancy Ryan, Claudia Kolb, Pokey Watson, 3:37.1)
800-Yard Freestyle Relay—Santa Clara S. C. (Gustavson, Ryan, Kolb, Watson, 7:53.7)
400-Yard Medley Relay—Santa Clara S. C. (Watson, Kolb, Linda Hildreth, Gustavson, 4:05.4)
Team—Santa Clara S. C. (136 pts)

National Collegiate (NCAA) Indoor Championships
(East Lansing, Mich., March 23–25)

(First times given are machine times, second times are watch times, which are official for records)

50-Yard Freestyle—Zachary Zorn, UCLA (0:21.12)
100-Yard Freestyle—Ken Walsh, Michigan State (0:45.67—0:45.6)
200-Yard Freestyle—Greg Buckingham, Stanford (1:41.46—1:41.3)
500-Yard Freestyle—Greg Buckingham (4:37.16—4:37)
1,650-Yard Freestyle—Mike Burton, UCLA (16:17.59—16:17.5)
100-Yard Backstroke—Charlie Hickcox, Indiana (0:53.17)
200-Yard Backstroke—Charlie Hickcox (1:55.30—1:55.3)
100-Yard Butterfly—Ross Wales, Princeton (0:50.26—0:50.2)
200-Yard Butterfly—Carl Robie, Michigan (1:52.59)

UPI

DEBBIE MEYER, a 15-year-old from Sacramento, Calif., set several records in 1967, including a time of 17 minutes 50.2 seconds in the women's 1,500-meter freestyle in August.

100-Yard Breaststroke—Ken Merten, Southern Methodist (0:58.54—0:58.4)
200-Yard Breaststroke—Ken Merten (2:07.99—2:07.9)
200-Yard Medley—Dick Roth, Stanford (1:56.09—1:56)
400-Yard Medley—Dick Roth (4:12.11—4:12)
400-Yard Freestyle Relay—Stanford (Luis Nicolao, Bill Meyer, Morgan Manning, Jim Laney, 3:05—3:04.9)
800-Yard Freestyle Relay—Stanford (Dick Roth, Pete Siebert, Mike Wall, Greg Buckingham, 6:54.65—6:54.5)
400-Yard Medley Relay—UCLA (Mike Berger, Russ Webb, Stan Cole, Zachary Zorn, 3:29.45—3:29.5)
One-Meter Dive—Ken Sitzberger, Indiana (510.25 pts)
Three-Meter Dive—Ken Sitzberger (572.65 pts)
Team—Stanford (275 pts)

National AAU Indoor Diving Championships
(Arlington, Tex., April 1, 2, 5)

Men's 1-Meter—Luis Nino de Rivera, Indiana (516.70 pts)
Men's 3-Meter—Keith Russell, Dick Smith Swim Gym, Phoenix, Ariz. (509.70)
Men's 10-Meter Platform—Keith Russell (548.9)
Women's 1-Meter—Lesley Bush, Princeton, N. J. (443.10)
Women's 3-Meter—Sue Gossick, Tarzana, Calif. (416.40)
Women's 10-Meter Platform—Patty Simms, Arcadia, Calif. (266.25)

TABLE TENNIS

World Championships
(Stockholm, April 10–16)

Singles—*Men:* Nobuhiko Hasegawa, Japan; *women:* Sachiko Morisawa, Japan
Doubles—*Men:* Hans Alser and Kjell Johansson, Sweden; *women:* Sachiko Morisawa and Saeko Hirota, Japan; *mixed:* Nobuhiko Hasewaga and Noriko Yamanaka, Japan
Swaythling Cup (men's team)—Japan
Corbillon Cup (women's team)—Japan

United States Championships
(San Diego, Calif., May 12–14)

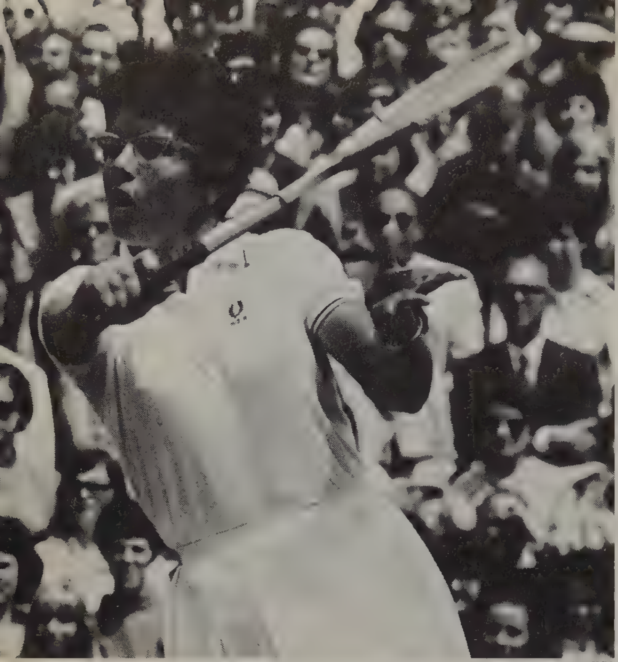
Singles—*Men:* Manji Fukushima, Tokyo, Japan; *women:* Patty Martinez, San Diego
Doubles—*Men:* Manji Fukushima and Hiroshi Takahashi; Tokyo; *women:* Patty Martinez and Priscilla Hirschkowitz, New York; *mixed:* Billie Bergstrand, Sweden, and Patty Martinez
Senior Singles—Leonard Klein, Baltimore
Senior Doubles—Bernie Bukiet, New York, and Fran Delaney, Stratford, Conn.
Junior Singles—Glen Cowan, Los Angeles
Junior Girls Singles—Patty Martinez

Canadian Championships
(Toronto, September 1–2)

Singles—*Men's Open:*—Dennis Neale, England; *closed:* Modris Zulps, Hamilton, Ont.; *women's open and closed:* Violetta Nesukaitis, Toronto
Doubles—*Men's Open:* Dennis Neale and Dell Sweeris, Grand Rapids, Mich.; *women's open:* Violetta Nesukaitis and Leah Neuberger, New York; *mixed:* Connie and Dell Sweeris
Senior Singles—Sol Schiff, New York
Junior Singles—John Tannehill, Middleport, Ohio
Junior Girls Singles—Janice Martin, Livonia, Mich.

TENNIS

Shortly after the season ended, the format for tennis competition began to change. While two promoters were persuading several of the leading amateurs to become professionals, the British Lawn Ten-



UPI

BILLIE JEAN KING is shown defeating Ann Haydon Jones for her second straight Wimbledon victory. She also beat Mrs. Jones at Forest Hills for the U. S. championship.

nis Association startled its staid fans by proposing to make the Wimbledon tournament an open event. The idea of letting professionals play in the hallowed amateur tournament outraged many fans but was lauded by some of the amateurs. The international ruling body, which is controlled by the votes of the smaller nations, threatened to expel the British if their plan went through.

One aspect of the call for open tennis was to eliminate the hypocrisy of the so-called amateur who collected large "expense" fees for playing in the tournaments. By the end of 1967, the promoters had persuaded the top Australian players John Newcombe and Tony Roche, Roger Taylor of Britain, and Nick Pilic of Yugoslavia to enter the pro ranks.

Newcombe and the Australians had dominated the play during the year but not as completely as did Mrs. Billie Jean King of Berkeley, Calif., in the women's division. Mrs. King, like Newcombe, won the Wimbledon and U. S. championships. With her victories over Mrs. Ann Haydon Jones of Britain in the finals of both events, Mrs. King became the first woman to score a sweep of the titles—singles, doubles, and mixed doubles—in the two tournaments since Alice Marble did so in 1938. In winning at Wimbledon for the second year in a row, Mrs. King beat Mrs. Jones, 6–3, 6–4. In the Forest Hills final she triumphed, 11–9, 6–4. Her partner in the doubles in both tournaments was Rosemary Casals of San Francisco, and in the mixed doubles, Owen Davidson of Australia.

Newcombe won both finals in straight sets, beating William Bungert of Germany, 6–3, 6–1, 6–1, at Wimbledon where he lost only two sets in all. He defeated Clark Graebner of Beachwood, Ohio, 6–4, 6–4, 8–6, at Forest Hills. With Roche, a left-hander, Newcombe also won the U. S. doubles at Brookline.

Another U. S. player, Nancy Richey of San Angelo, Tex., took the Australian title. She also won the clay courts championship for the fourth time before an ailing back forced her to the sidelines.

The U. S. indoor title went to Charles Pasarell of Puerto Rico, who beat Arthur Ashe of Richmond, Va., in the final, 13–11, 6–2, 2–6, 9–7.

Roy Emerson, who had had a bad year in 1966, won the Australian and French championships and helped Newcombe and Roche turn back the challenge of Spain in the Davis Cup competition. The Australians won, 4–1, with Manuel Santana beating Newcombe for the only Spanish point. It was the Aussies' 11th Cup victory in the last 13 years. Ecuador had eliminated the United States in Davis Cup zone competition in a stunning upset.

The U. S. women won the Wightman Cup, beating England, 6–1, and the Federation Cup, defeating Germany in the final.

Major Amateur Tournaments

Davis Cup—Australia (defeated Spain 4–1 at Brisbane, December 26–28)

Wightman Cup (women)—United States (defeated Britain 6–1, at Cleveland, August 12–14)

Federation Cup (women)—United States (defeated Britain 2–0, in finals at Berlin, June 11)

Stevens Cup (seniors)—United States (defeated Canada at Forest Hills, N. Y., August 4–6)

U. S. Singles (Forest Hills, September 1–10)—*Men:* John Newcombe, Australia; *women:* Mrs. Billie Jean King, Berkeley, Calif.; *senior men:* Jaroslav Drobny, England; *35 years and over:* Brian Tobin, Australia; *senior women:* Mrs. Dorothy Bundy Cheney, Santa Monica, Calif.

U. S. Doubles (Brookline, Mass., August 21–29)—*Men:* John Newcombe and Tony Roche, Australia; *women:* Mrs. King, and Rosemary Casals, San Francisco; *mixed doubles:* Mrs. King, and Owen Davidson, Australia; *senior men:* Gardnar Mulloy, Miami, and William Talbert, New York; *senior women:* Mrs. Shirley Fry Irvin, Darien, Conn., and Mrs. Betty Rosenquest Pratt, Maitland, Fla.

U. S. Clay Court—(Milwaukee; finals, July 23)— *men's singles:* Arthur Ashe, Richmond, Va.; *women's singles:* Nancy Richey, San Angelo, Tex.; *men's doubles:* Marty Riessen, Evanston, Ill., and Clark Graebner, Beachwood, Ohio; *women's doubles:* Kerry Melville and Karen Krantzcke, Australia

U. S. Men's Indoor (Salisbury, Md.; finals, February 19)—*singles:* Charles Pasarell, Puerto Rico; *doubles:* Arthur Ashe and Charles Pasarell; *seniors:* Emory Neale, Portland, Ore.; *senior doubles:* Neale, and Sammy Lee, Seattle

U. S. Women's Indoor (Winchester, Mass.; finals, February 19) —*singles:* Mrs. King; *doubles:* Mrs. Carol Hanks Aucamp and Mary Ann Eisel, St. Louis; *mixed doubles:* Mrs. King, and Paul Sullivan, Cambridge, Mass.

Wimbledon (England, June 26–July 7)—*Men's singles:* John Newcombe; *women's singles:* Mrs. King; *men's doubles:* Bob Hewitt and Fred McMillan, South Africa; *women's doubles:* Mrs. King and Rosemary Casals; *mixed doubles:* Mrs. King and Owen Davidson

Australian Nationals (Adelaide; finals, January 28–29)—*Men's singles:* Roy Emerson, Australia; *women's singles:* Nancy Richey; *men's doubles:* John Newcombe and Tony Roche; *women's doubles:* Lesley Turner and Judy Tegart, Australia; *mixed doubles:* Owen Davidson and Lesley Turner

Canadian Nationals (Montreal; finals, August 8)—*Men's singles:* Manuel Santana, Spain; *women's singles:* Kathy Harter, Seal Beach, Calif.; *men's doubles:* Santana and Roy Emerson; *women's doubles:* Vicki Berner and Faye Urban, Canada; *mixed doubles:* Ray Keldie, Australia, and Kathy Harter; *senior men:* J. Giguere, Canada; *senior women:* Louise Brown, Canada; *senior doubles:* J. Skelton and E. Tarshis, Canada

French International (Paris; finals, June 3–4)—*Men's singles:* Roy Emerson; *women's singles:* Françoise Durr, France; *men's doubles:* John Newcombe and Tony Roche; *women's doubles:* Miss Durr and Gail Sherriff, Australia; *mixed doubles:* Mrs. King and Owen Davidson

Professional

New York (Madison Square Garden)—Rod Laver, Australia
London (Wembley)—Ken Rosewall, Australia
Paris—Rod Laver
Newport, R. I.—Rod Laver
London (Wimbledon)—Rod Laver

TRACK AND FIELD

In the two most popular of the track and field events, the world record for the 1-mile run went down and the mark for the pole vault went up as the athletes prepared for the 1968 Olympic Games scheduled for Mexico City.

Jim Ryun, the 20-year-old runner from Kansas, accepted the Sullivan Award as the outstanding amateur athlete of 1966 in February and soon put himself into the 1967 competition by breaking two world records. First, on June 24, he lowered—by two-tenths of a second to 3:51.1—the world mile

JIM RYUN, who competed in the Olympic Games at Tokyo at the age of 17, broke two world records for running in 1967 at the age of 20 and was hailed as the outstanding track athlete of the year. The 6-foot 2-inch University of Kansas sophomore lowered his own record for the mile run in the National AAU championships on June 22, with a 3:51.1 clocking. Then two weeks later he set a world record for 1,500 meters in 3:33.1.

Setting records is not novel for James Ronald Ryun, who was born in Wichita, Kan., on April 29, 1947. He set a mile record for schoolboys with 4:06.4 in 1964, the year he reached the semifinals in the Olympic 1,500-meter race, and set the American mile mark at 3:55.3 in 1965. In 1966 he set a world record for the half-mile at 1:44.9 (this awaits final approval because of a jurisdictional dispute) and brought the world mile mark back to the United States with a 3:51.3 run. He was voted the Sullivan Award as the nation's top amateur athlete in 1966.

mark that he had made in 1966. Then, on July 8, he broke the record for the 1,500 meters (the metric mile). His time of 3:33.1 bettered Herb Elliott's 1960 clocking by 2½ seconds.

The pole vault record, which has been in a constant state of escalation since the introduction of the fiberglass pole, was moved up to 17 feet, 7¾ inches by Paul Wilson, on the same date that Ryun set the mile mark. Wilson broke the record (by ¾ inch) set two weeks previously by his University of Southern California teammate, Bob Seagren. Seagren remained on the record list, however, with a 17-foot, 3-inch indoor mark made in Cleveland in February.

Altogether 186 assorted listed records broken or tied by Americans were presented to the AAU for approval—71 of them made by women. The 186 records, 21 bettered listed world standards.

These included new world marks for the 440-yard and 400-meter runs by Tommie Smith of San Jose State College, and a shot put of 71 feet, 5½ inches by Randy Matson of Texas A. & M. that bettered his own mark of 70–7¼. Smith, running on his home field, hit 44.5 seconds at 400 meters on the way to a 44.8 clocking for the 440 yards. The 6-foot, 3-inch athlete had set indoor records of 46.2 for the same distances in February.

Men's AAU Outdoor Championships
(Bakersfield, Calif., June 22–23)

100 Yards—Jimmy Hines, Texas Southern (0:9.3)
220 Yards—Tommie Smith, Santa Clara Youth Village (0:20.4)
440 Yards—Lee Evans, Santa Clara, Y. V. (0:45.3)
880 Yards—Wade Bell, Oregon (1:46.1)
Mile—Jim Ryun, Jayhawk Track Club, Lawrence, Kan. (3:51.1)
3-Miles—Gerry Lindgren, Washington State (13:10.6)
3,000-Meter Steeplechase—Pat Traynor, U. S. Air Force (8:42)
6 Miles—Van Nelson, St. Cloud State (28:18.8)
120-Yard High Hurdles—Willie Davenport, Southern University (0:13.3)
440-Yard Intermediate Hurdles—Ron Whitney, Southern California Striders (0:50.3)
2-Mile Walk—Ron Laird, New York A. C. (13:41.4)
Hammer Throw—Ed Burke, S. C. Striders (235 ft 11 in)
Discus—Gary Carlsen, unattached (205 ft 10 in)
Shot Put—Randy Matson, Texas A. and M. (66 ft 11 in)
Javelin—Delmon McNabb, Louisiana State (268 ft 3 in)
Long Jump—Jerry Proctor, Pasadena A. A. (26 ft ¾ in)
High Jump—Otis Burrell, unattached (7 ft ¼ in)
Triple Jump—Charles Craig, Long Beach 49ers (53 ft 1½ in)
Pole Vault—Paul Wilson, S. C. Striders (17 ft 7¾ in)
Team—Southern California Striders (64 pts)

Men's AAU Indoor Championships
(Oakland, Calif., March 3–4)

60 Yards—Bill Gaines, Mullica Hill, N. J. (0:6.0)
60-Yard Hurdles—Willie Davenport, unattached (0:7.0)
600 Yards—Jim Kemp, Long Beach 49ers (1:10.6)
1,000 Yards—Preston Davis, Long Beach 49ers (2:09.4)
Mile—Sam Bair, Kent State (4:03.2)
3 Miles—Tracy Smith, Arcadia, Calif. (13:16.2)

UPI

JIM RYUN of Wichita, Kan., in the process of setting a world record for 1,500 meters in 3:33.1, in July. Two weeks earlier Ryun had set a new world record in the mile.

Mile Walk—Don Denoon, Southern California Striders (6:28)
Mile Relay—San Jose State (Ken Shackleford, John Bambury, Lee Evans, Tommie Smith, 3:14.9)
2-Mile Relay—Long Beach 49ers (Darryl Taylor, John Perry, Tom Van Ruden, Preston Davis, 7:37)
Sprint Medley Relay—S. C. Striders (Ron Whitney, Larry Dunn, Bob Frey, Bill Toomey, 1:51.6)
High Jump—John Rambo, Long Beach 49ers (7-1)
Long Jump—Bob Beamon, Texas Western T. C. (26—11½)
Triple Jump—Art Walker, S. C. Striders (52-10¼)
Pole Vault—Bob Seagren, Southern California (17-0¾)
Shot Put—George Wood, Southern Illinois (63-11)
35-Pound Weight Throw—Ed Burke, S. C. Striders (69-2)
Team—Tie: Southern California Striders and Long Beach 49ers, 32 points each

U. S. Track and Field Federation
Outdoor Championships
(Albuquerque, N. M., June 9–10)

100 Yards—Jim Freeman, Murray State (0:09.5)
220 Yards—Orin Richburg, Kent State (0:20.7)
440 Yards—Steve Carson, Iowa State (0:46.4)
880 Yards—Jim Ryun, Jayhawk T. C. (1:47.2)
Mile—Ryun (4:09.3)
3-Mile—George Scott, New Mexico T. C. (14:23)
6-Mile—Terry Harrison, Colorado State (30:29)
3,000-Meter Steeplechase—Conrad Nightingale, Kansas State Wildcat T. C. (9:04.9)
120-Yard High Hurdles—Mike Butler, Wisconsin (0:13.7)
440-Yard Hurdles—David Adkins, Alabama (0:50.5)
440-Yard Relay—Rice (Conely Brown, Fred McCloud, Douglas Belzung, Dale Bernauer, 0:40.4)
Mile Relay—Iowa (Fred Ferree, Carl Frazier, Mike Mondane, Jon Reimer, 3:05.2)
Hammer—Robert Narcessian, Rhode Island (200 ft ½ in)
Javelin—Delmon McNabb, Louisiana State (266 ft 3½ in)
Discus—Miles Lister, Oklahoma State (174 ft 2½ in)
Shot Put—Jack Harvey, Michigan (58 ft 9¼ in)
Long Jump—Gary Ard, Jayhawk T. C. (25 ft 2¾ in)
High Jump—Ed Caruthers, Arizona (7 ft ¼ in)
Pole Vault—Bill Burnette, Iowa (15 ft 6 in)
Triple Jump—Art Baxter, New Mexico T. C. (52 ft 1¾ in)
Team—New Mexico Track Club (85⅓ pts)

U. S. Track and Field Federation
Indoor Championships
(Madison Square Garden, N. Y., February 10)

60 Yards—William Gaines, Mullica Hill, N. J. (0:06.1)
60-Yard High Hurdles—Erv Hall, Villanova (0:07.1)
500 Yards—Tommie Smith, San Jose State (0:57.9)
600 Yards—Steve Carson, Iowa State (1:11.1)

880 Yards—Ricardo Urbina, Georgetown (1:50.8)
Mile—Dave Patrick, Villanova (4:00.6)
1,000 Yards—Ian Hamilton, Villanova (2:08.9)
2 Miles—Van Nelson, St. Cloud State (8:50.1)
Mile (collegiate)—Terry Donnelly, William and Mary (4:13.2)
Mile Relay—Central Connecticut State (3:20.2)
Mile Relay—Fordham (3:22.4)
Mile Relay—Penn State (3:20.7)
Mile Relay—Maryland State (3:21.4)
2-Mile Relay—Maryland (7:37.9)
2-Mile Relay—Michigan (7:29.8)
High Jump—Ed Caruthers, Arizona (6 ft 10 in)
Pole Vault—Bob Seagren, Southern California (16 ft 6¼ in)

National Collegiate (NCAA) Outdoor Championships

(Provo, Utah, June 15–17)

100 Yards—Charlie Greene, Nebraska (0:9.2)
220 Yards—Tommie Smith, San Jose State (0:20.2)
440 Yards—Emmett Taylor, Ohio University (0:45.9)
880 Yards—Wade Bell, Oregon (1:47.6)
Mile—Jim Ryun, Kansas (4:03.5)
3 Miles—Gerry Lindgren, Washington State (13:47.8)
6 Miles—Gerry Lindgren (28:44)
3,000-Meter Steeplechase—Chris McCubbins, Oklahoma State (8:51.4)
120-Yard High Hurdles—Earl McCullouch, Southern California (0:13.4)
440-Yard Hurdles—Bob Steele, Michigan State (0:50.2)
440-Yard Relay—Southern California (Earl McCullouch, Fred Kuller, O. J. Simpson, Lennox Miller, 0:38.6)
Mile Relay—Iowa (Fred Ferree, Carl Frazier, Jon Reimer, Mike Mondane, 3:06.8)
Long Jump—Gary Ard, Kansas (25 ft 9 in)
High Jump—Stephen Brown, Idaho (7 ft 1 in)
Triple Jump—Art Baxter, New Mexico (52 ft 4½ in)
Javelin—Delmon McNabb, Louisiana State (263 ft 5 in)
Discus—Randy Matson, Texas A. and M. (190 ft 4 in)
Shot Put—Randy Matson (67 ft 9¼ in)
Hammer Throw—Bob Narcessian, Rhode Island (197 ft ½ in)
Pole Vault—Bob Seagren, Southern California (17 ft 4 in)
Team—Southern California (86 pts)

National Collegiate (NCAA) Indoor Championships

(Detroit, March 10–11)

60 Yards—Charlie Greene, Nebraska (0:6.0)
60-Yard Hurdles—Earl McCullouch, Southern California (0:7.0)
440 Yards—Bill Calhoun, Oklahoma (0:48.9)
600 Yards—Steve Carson, Iowa State (1:10.2)
880 Yards—Dave Patrick, Villanova (1:48.9)
1,000 Yards—Ray Arrington, Wisconsin (2:07.8)
Mile—Jim Ryun, Kansas (3:58.6)
Invitation Mile—Art Dulong, Holy Cross (4:08.8)
2 Miles—Gerry Lindgren, Washington State (8:34.7)
Mile Relay—Oklahoma (James Shields, Jim Hardwick, Tom Melton, Bill Calhoun, 3:15.5)
2-Mile Relay—Southern California (Richard Joyce, Dave Buck, Dennis Carr, Carl Trentadue, 7:30.1)
Distance Medley Relay—Kansas State (Charles Harper, Jerry Holbrook, Wes Dutton, Conrad Nightingale, 9:44.6)
High Jump—Ted Downing, Miami, Ohio (7-0)
Long Jump—Aaron Hopkins, Toledo (24-7¾)
Pole Vault—Bob Seagren, Southern California (17-0¼)
Shot Put—Ken Patera, Brigham Young (59-6)
35-Pound Weight Throw—Andy Yuen, Connecticut (61-9¾)
Team—Southern California (26 pts)

Women's AAU Outdoor Championships

(Santa Barbara, Calif., July 1–2)

100 Meters—Barbara Ferrell, Los Angeles Mercurettes (0:11.1)
200 Meters—Diana Wilson, Tennessee State (0:23.6)
400 Meters—Charlette Cooke, Washington, D. C. (0:52.5)
800 Meters—Madeline Manning, Tennessee State (2:03.6)
80-Meter Hurdles—Mamie Rallins, Mayor Daley Youth Foundation, Chicago (0:10.9)
200-Meter Hurdles—Pat Van Wolvelaere, Angels T. C., Seattle (0:27.8)
1,500 Meters—Natalie Rocha, Wills Spikettes, Sacramento, Calif. (4:29)
Javelin—RaNae Bair, Mission Belles, San Diego (196 ft 3 in)
Shot Put—Maren Seidler, New Jersey Shore A. C. (46 ft 10 in)
Discus—Carol Moseke, Nebraska T. C., Beatrice (152 ft 5 in)
Long Jump—Pat Winslow, Millbrae, Calif., Lions (20 ft 8¼ in)
High Jump—Eleanor Montgomery, Tennessee State (5 ft 6¼ in)
400-Meter Relay—Texas Southern (0:46.3)
800-Meter Medley Relay—Tennessee State (1:41.7)
Team—Tennessee State (77 pts)

Women's AAU Indoor Championships

(Oakland, Calif., March 3–4)

60 Yards—Wyomia Tyus, Tennessee State (0:6.7)
60-Yard Hurdles—Pat Van Wolvelaere, Angels T. C., Seattle (0:7.7)
220 Yards—Una Morris, Tennessee State (0:25)
440 Yards—Kathy Hammond, Wills Spikettes, Sacramento, Calif. (0:55.2)
880 Yards—Madeline Manning, Tennessee State (2:08.4)
Mile Run—Doris Brown, Seattle Falcons (4:43.3)
4 x 160-Yard Relay—Detroit Track Club (Carolyn Coleman, Debbie Barbridge, Linda White, Karen Dennis, 1:12.4)
Sprint Medley Relay—Tennessee State (Madeline Manning, Mattilene Render, Marcella Daniel, Wyomia Tyus, 1:46.6)
High Jump—Eleanor Montgomery, Tennessee State (5 ft 9 in)
Long Jump—Martha Watson, Tennessee State (20 ft 6½ in)
Shot Put—Lynn Graham, Los Angeles Mercurettes (46 ft 4¾ in)
Basketball Throw—Barbara Friedrich, New Jersey Shore A. C. (131 ft 1½ in)
Team—Tennessee State (33 pts)

AAU Long-Distance Events

15,000 Meters—James Freman, Snohomish (Wash.) A. C. (47:28.4)
20,000 Meters—Andy Boychuck, Toronto Olympic Club (1:05:47.4)
25,000 Meters—Kerry Pearce, University of Texas, El Paso (1:22.54.2)
30,000 Meters—Tom Osler, So. Jersey T. C. (1:40:40.8)
Marathon (Holyoke, Mass., June 11)—Ron Daws, Twin Cities T. C., Minneapolis (2:40:07.4)
1-Hour Run—Mike Kimball, Santa Barbara (Calif.) T. C. (12 mi, 296 yds)
10,000-Meter Walk—Ron Laird, New York A. C. (45:29.2)
15,000-Meter Walk—Ron Laird (1:08:13.8)
20,000-Meter Walk—Ron Laird (1:38:40)
25,000-Meter Walk—Ron Laird (1:59:18)
30,000-Meter Walk—Ron Laird (2:29:05.6)
35,000-Meter Walk—Ron Laird (2:57:40)
40,000-Meter Walk—Tom Dooley, Athens A. C., Oakland, Calif. (3:30:10)
50,000-Meter Walk—Larry Young, Southern California Striders (4:33:03)
1-Hour Walk—Ron Laird (8 mi 141 yds 2 ft)

Other Events

AAU Decathlon—Bill Toomey, Southern California Striders (7,880 pts)
USTFF Decathlon—Mike Mattox, Graceland (6,841)
AAU Pentathlon—Lynn Baker, University of Colorado (3,448)
All-Around—William Urban, New York A. C. (8,035)
AAU Women's Pentathlon—Mrs. Pat Winslow, Millbrae (Calif.) Lions (4,824)
U. S. Modern Pentathlon—Bjorn Ferm, Sweden (5,058)
AAU 56-lb Weight Throw—George Frenn, Long Beach, Calif. (46 ft 9½ in)
440-Yard Relay—Philadelphia Pioneer Club (Tom Randolph, Monty Frazier, Orin Richburg, Erv Hall, 0:40.1)
Mile Relay—Philadelphia Pioneer Club (William Del Vecchio, Orin Richburg, Tom Randolph, Jim Burnett, 3:10.6)
Distance Medley Relay—Baltimore Olympic Club (Phil Potter, Dennis Woltman, Mike Mukins, Pete Santos, 10:13)
Boston Marathon—Dave McKenzie, New Zealand (2:15:45)

Intercollegiate Champions

NCAA—*College Division:* Long Beach (Calif.) State
NAIA—Southern University
IC 4A—Villanova

WATER SKIING

World Championships

(Sherbrooke, Quebec, August 27–September 3)

Men

Overall—Mike Suyderhoud, San Anselmo, Calif. (2,734 pts)
Slalom—Tito Antunano, Mexico (45 buoys)
Jumping—Alan Kempton, Tampa, Fla. (149 ft)
Tricks—Alan Kempton (4,346 pts)

Women

Overall—Jeannette Stewart-Wood, Britain (2,765 pts)
Slalom—Elizabeth Allan, Winter Park, Fla. (40 buoys)
Jumping—Jeannette Stewart-Wood (97 ft)
Tricks—Dany Duflot, France (3,649 pts)
Team (men and women)—United States (8,699 pts)

National Championships

(Austin, Tex., August 17–20)

Men

Overall—Chuck Stearns, Bellflower, Calif. (2,781 pts)
Slalom—Chuck Stearns (44 buoys)
Jumping—Chuck Stearns (143 ft)
Tricks—Alan Kempton (4,501 pts)

Women

Overall—Weslie Walker, Cypress Gardens, Fla. (2,910 pts)
Slalom—Stephenie Stephens, San Diego, Calif. (44 buoys)
Jumping—Barbara Clack, Lakeland, Fla. (93 ft)
Tricks—Weslie Walker (2,996 pts)

Masters Championships

(Callaway Gardens, Ga., July 14–16)

Men

Overall—Alan Kempton (2,707 pts)
Slalom—Kris LaPoint, Castro Valley, Calif. (47 buoys)
Jumping—Alan Kempton (147 ft)
Tricks—Alan Kempton (4,768 pts)

Women

Overall—Elizabeth Allan (2,949 pts)
Slalom—Elizabeth Allan (49½ buoys)
Jumping—Jeannette Stewart-Wood (103 ft)
Tricks—Christy Lynn Weir, McQueeney, Tex. (3,536 pts)

WEIGHT LIFTING

National AAU Championships

(Columbus, Ohio, June 9–10)

Bantamweight—Gary E. Hanson, Queens Village, N. Y.
Featherweight—Walter Imahara, Baton Rouge, La.
Lightweight—Homer Brannum, U. S. Air Force
Middleweight—Russell Knipp, York, Pa.
Light Heavyweight—Joseph Puleo, Detroit
Middle Heavyweight—Philip Grippaldi, Chicago
Heavyweight—Robert Bednarski, York, Pa.

WRESTLING

World Championships

Greco-Roman
(Bucharest, September 3)

114.5 Pounds—Viktor Bakulin, USSR
125.5 Pounds—Ion Baciv, Rumania
138.5 Pounds—Roman Rurua, USSR
154 Pounds—Eere Tapio, Finland
171.6 Pounds—Viktor Iqoumenev, USSR
191.5 Pounds—Laszle Sillay, Hungary
213.5 Pounds—Nikolai Iacevence, USSR
Heavyweight—Istvan Kosma, Hungary

Freestyle
(New Delhi, India, November 14)

114.5 Pounds—Shigeo Nakata, Japan
125.5 Pounds—Ali Aliev, USSR
138.5 Pounds—Massaki Kaneko, Japan
154 Pounds—Abdullah Movahed, Iran
171.6 Pounds—Daniel Sauton-Robin, France
191.5 Pounds—Boris Gurevitch, USSR
213.5 Pounds—Ahmed Ayik, Turkey
Heavyweight—Alexandre Medved, USSR

National AAU Championships

(Lincoln, Neb., April 11–15)
Greco-Roman

114.5 Pounds—Dave Hazelwinkel, St. Cloud, Minn.
125.5 Pounds—Tomino Michio, New York Athletic Club
138.5 Pounds—Charles Coffee, Minnesota Wrestling Club
154 Pounds—Ben Northrup, Bay Area Wrestling Association, San Francisco
171.5 Pounds—Rudy Williams, Michigan Wrestling Club, Detroit
191.5 Pounds—Wayne Baughman, U. S. Air Force
213.5 Pounds—Gary Stensland, Multnomah Wrestling Club, Portland, Ore.
Heavyweight—Larry Kristoff, Mayor Daley Youth Foundation, Chicago
Outstanding performer—Baughman
Team—Mayor Daley Youth Foundation

Freestyle

114.5 Pounds—Noriyuki Suzuki, Japan
125.5 Pounds—Richard Sanders, Multnomah W. C.
138.5 Pounds—Robert Buzzard, Michigan W. C.
154 Pounds—Bob Douglas, Michigan W. C.
171.5 Pounds—Pat Kelly, Mayor Daley Y. F.
191.5 Pounds—William B. Harlow, Michigan W. C.
213.5 Pounds—Hank Schenk, U. S. Army
Heavyweight—Larry Kristoff, Mayor Daley Y. F.
Outstanding performer—Kelly
Team—Mayor Daley Y. F. (40 pts)

National Collegiate (NCAA) Championships

(Kent, Ohio, March 23–25)

115 Pounds—Richard Sanders, Portland State
123 Pounds—Mike Caruso, Lehigh
130 Pounds—Harold McGuire, Oklahoma
137 Pounds—Dale Anderson, Michigan State
145 Pounds—Don Henderson, Air Force Academy
152 Pounds—James Kamman, Michigan
160 Pounds—Vic Marcucci, Iowa State
167 Pounds—George Radman, Michigan State
177 Pounds—Fred Fozzard, Oklahoma State
191 Pounds—Tom Schlendorf, Syracuse
Heavyweight—Curley Culp, Arizona State
Team—Michigan State (74 pts)

YACHTING

When *Dame Pattie,* the Australian 12-meter yacht that challenged for the America's Cup, was launched on Aug. 22, 1966, the plans for *Intrepid,* the U. S. defender, were still on the drawing board. When the Cup races were finished in September 1967, however, it was fully acknowledged that design of the U. S. yacht was a year ahead of the challenger's, which was based on previous Cup winners.

Intrepid, which won 18 of 19 trial races against three other Cup hopefuls to gain the defending role, beat the Australian yacht in four straight races in the Atlantic off Newport, between September 12 and 18, by margins that ranged from a half-mile to a mile. Thus U. S. yachtsmen successfully defended for the 20th time the silver ewer trophy that commemorates the 1851 victory of the *America* over 14 British yachts in a race around the Isle of Wight.

Intrepid, designed by Olin J. Stephens II of New York, had two innovations. One was a second rudder or trim-tab which acted like the lift foil of an airplane. The other was the placing of the coffee-grinder winches and most of the crew below deck; this put more weight at the bottom and provided more maneuverability and faster starting.

To complement the design, the deck was further stacked against the Aussies by the selection of Emil (Bus) Mossbacher of White Plains, N. Y., as the skipper of a rugged, experienced crew. The work of these men in setting and trimming the sails in the tacking duels and on fetching the marks was so perfect that there was only one slight misfunction in 14 hours of sailing over the 24.3-mile course.

Mossbacher, who had sailed *Weatherly* to victory over *Gretel* in the 1962 America's Cup races, continued his mastery over the same Australian skipper, Alexander (Jock) Sturrock. The American brought *Intrepid* home first in the opening race, sailed in brisk breezes, by 5 minutes and 58 seconds; took the second by 3:36; the third by 4:41; and the final by 3:35. On only 3 of the 24 legs sailed was *Dame Pattie* clocked in faster time than the U. S. defender.

North American Yacht Racing Union Champions

Men (Mallory Cup)—Clifford Campbell, Beechwood, N. J.
Women (Adams Trophy)—Mrs. William H. Foulk Jr., Greenwich, Conn.
Junior (Sears Cup)—John Dane, New Orleans
Singlehanded (O'Day Trophy)—Charles Barthrop, Piedmont, Calif.

Distance Races

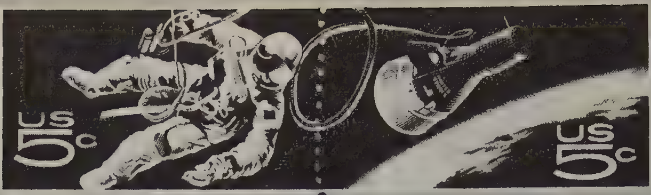
Annapolis-Newport (473 mi)—Juan M. Cameron's sloop *Lancetilla,* Washington
Chicago-Mackinac (338 mi)—Alfred Stern Jr.'s sloop *Diavolo,* Chicago
Fastnet (Cowes-Plymouth, England, 605 mi)—Eric Tabarly's ketch *Pen Duick II,* France
Marblehead-Halifax (360 mi)—U. S. Merchant Marine Academy's schooner *Nina,* Kings Point, N. Y.
Miami-Montego Bay, Jamaica (811 mi)—Ted Turner's sloop *Vamoose,* Atlanta
Miami-Nassau (184 mi)—Thor Ramsing's sloop *Solution,* Greenwich, Conn.
Port Huron-Mackinac (235 mi)—Peter Grimm's ketch *Escapade,* Chicago
St. Petersburg-Fort Lauderdale (403 mi)—Arnold Haskell's sloop *Chubasco,* Newport Harbor, Calif.
Transpacific (Los Angeles-Hawaii, 2,225 mi)—Skip Allan's sloop *Holiday Too,* Los Angeles
Southern Ocean Racing Conference Champion—George Moffett's sloop *Guinevere,* New York

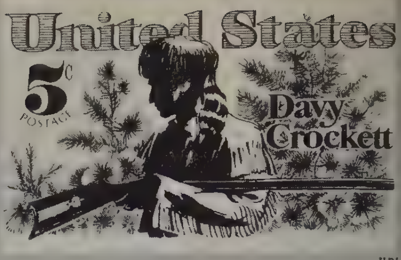
One-Design Class Championships

(National unless designated otherwise)

Albacore (North American)—Don Grant, Muskoka Lake, Ont.
Atlantic—Thomas Kantor, Westport, Conn.
Blue Jay—Bill Canning, Groton, Conn.
Comet (International)—Talbott Ingram, Shrewsbury, N. J.
Comet Junior—Isaac Braddock, Namequoit, Mass.
Cottontail—Scott Brim, Old Greenwich, Conn.
Dragon (World)—Bud Friederichs, Jr., New Orleans
E. Scow—Brad Robinson, Minneapolis
Ensign—Benjamin H. Byron, Jr., Riverside, Conn.
Falcon—Howard Thieme, Needham, Mass.
Finn—Fred Miller, Jr., Newport Beach, Calif.
Finn (World)—Willie Kuhwiede, West Germany
5.5—Don McNamara, Boston
Flying Dutchman—Bud Melges, Lake Geneva, Wis.
420—John Drew, Little Silver, N. J.
420 (World)—Michel Rogiers, Belgium
Highlander—Romeyn Everdell, Concord, Mass.
Jet 14—Hansi Bonn, Lavalette, N. J.
Lido 14—Harry Wood, Alamitos Bay, Calif.
Lightning (World)—Lou Pocharski, Marblehead, Mass.
Lightning (North American)—Bruce Goldsmith, Chicago
Luders 16 (International)—Graham Ross, Chicago
Moth (World)—Blair Fletcher, Cherry Hill, N. J.
Moth—Lee Creekmore, Miami
Multi-hull—Dean Ince (Mini-cat), Bellport, N. Y.
OK Dinghy (World)—Bjern Arnessen, Sweden
OK Dinghy (North American)—Brian Thomas, San Diego
One-Design—Roy Christianson, Milwaukee
One Design (World)—William Widnall, Marblehead, Mass.
110 (International)—Terry Ryan, San Diego
Raven—Robert Sellers, Grosse Pointe, Mich.
Rhodes-19—Robert Stine, Mobile, Ala.
Snipe—Earl Elms, San Diego
Snipe (World)—Nelson Piccolo, Brazil
Star (World)—Paul Elvstrom, Denmark
Tempest—Charley Ulmer, Jr., New York
Thistle—Peter Bordes, Brooklyn
Triton—Earl Larson, Richmond, Calif.
Windmill—Paul Gernhardt, Overland Park, Kan.
Windmill (World)—John Bear, Bradenton Beach, Fla.
Wood Pussy—Dick Wachenfeld, Fair Haven, N. J.
Y-Flyer (North American)—John Baker, Savannah, Ga.
Lipton Trophy (College)—Britain
Morss Trophy (College)—Southern California

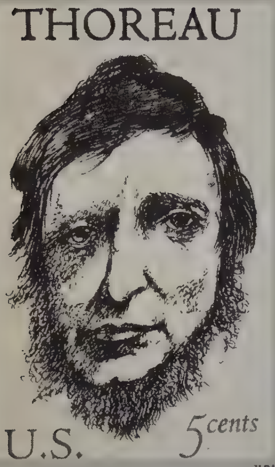
BILL BRADDOCK
The New York "Times"





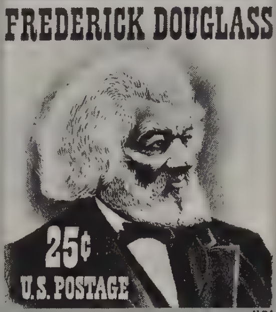
UPI

DAVY CROCKETT commemorative was issued at San Antonio, Tex., the site of the Alamo.



UPI

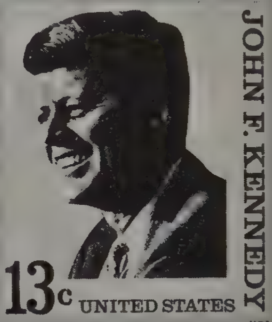
(*Above*) TWIN STAMP honoring the U. S. space program was perforated for use either in 5- or 10-cent value. (*Left*) Portrait of Thoreau stirred comment because it looked like a hippie.



UPI

FREDERICK DOUGLASS stamp honors the Negro slave who rose to become a leading abolitionist.

JOHN F. KENNEDY stamp uses a portrait based upon a photo of the late president.



UPI

STAMP COLLECTING

Foreign postal administrations continued to produce stamps in unabated quantities in 1967, and in the United States the year was one of postal revolution. More innovations were introduced than in the previous 125-year history of U. S. postage stamps.

Larger Stamps. U. S. stamps were enlarged in 1967, first with the Space Program Progress commemorative, issued at Cape Kennedy, Fla., in September. The stamp appeared as a "twin" comprising two halves, each with a 5¢ franking value. One shows the first American "walk in space" in 1965, by the late astronaut Edward White II. The other shows the Gemini 4 capsule to which White was tethered. The halves are separated by perforations.

A second enlargement appeared in November 1967 when Hans Memling's painting *Madonna and Child with Angels,* first used in 1966, was reused in double size, for Christmas mail. The 6¢ postal card for the 1967 Boy Scout Jamboree in Idaho had a design 2½ inches long, the largest ever used on a card.

Reused Designs. In addition to the Memling painting, the United States repeated another design in 1967. In April, when a new 20¢ stamp was needed for the 33⅓% increase in European airmail rates, the James Audubon design of "Columbia Jays," used in 1963 as a 5¢ commemorative, was reissued.

Use of Photogravure. Another innovation in 1967 was the use of photogravure for domestic stamps. The 1967 5¢ stamp of the American Painting series, which shows *The Biglin Brothers Racing,* painted by Thomas Eakins, was produced by the Photogravure and Color Company of Moonachie, N. J. It was the first time since 1842 that any domestic stamp has been made by a process other than hand engraving using a steel die. With the exception of the 1944 Overrun Nations set, it was also the first stamp made by a private, nongovernmental contractor since 1894.

Exhibitions. At the Amphilex 67 International Stamp Show in Amsterdam, the Netherlands, in May, Fred L. Reed of New York was the first American to win the top award for the best collection of Dutch stamps. Reed competed in the exhibition with 86 specialists, most of them Netherlanders.

New U. S. Issues. Stamps issued during 1967 were 1¼¢ Albert Gallatin regular (January 30); 25¢ Frederick Douglass regular (February 14); 10¢ Andrew Jackson regular (March 15); 8¢ Alaska Purchase airmail (March 30); 6¢ Virgin Islands airmail postal card (March 31); 5¢ National Grange commemorative (April 17); 20¢ airmail (April 26); Expo 67 commemorative (May 25); 13¢ John F. Kennedy regular and aerogramme (May 29); 5¢ Erie Canal commemorative (July 4); 5¢ Lions International commemorative (July 5); 5¢ Henry David Thoreau commemorative (July 12); 5¢ Nebraska Statehood (July 29); 5¢ Voice of America commemorative (August 1); 6¢ Scout postal card (August 4); 5¢ Davy Crockett commemorative (August 17); 13¢ airmail postal card (September 2); 3¢ Francis Parkman regular (September 16); 5¢ Space "twin" (September 29); 5¢ Urban Planning commemorative (October 2); 5¢ Finnish Independence jubilee (October 6); $1 Eugene O'Neill regular (October 16); 20¢ George C. Marshall regular (October 24); 5¢ American Painting (November 2); 5¢ Christmas stamp (November 6); 15¢ George Washington reengraved regular (November 17); and 5¢ Mississippi commemorative (December 10).

Ernest A. Kehr

STEEL

Technical developments in the United States, Canada, and Britain, and the relinquishing of control of an industrial empire by the Krupp family, were the outstanding events in the industry in 1967.

The International Iron and Steel Institute was organized, and its headquarters were set up in Brussels, Belgium. Besides collecting and publishing statistics, the institute will provide a forum for exchanging information on technical progress in steelmaking and will promote the use of steel in competition with other materials. Countries represented at the preliminary meeting were Australia, Belgium, France, Great Britain, Italy, Japan, Luxembourg, the Netherlands, United States, and West Germany. Hans-Gunther Sohl of August Thyssen-Hütte, A. G., is chairman of the institute, and Logan T. Johnson of Armco Steel Corporation is vice chairman.

Production. Raw steel production in the United States in 1967 totaled 126,920,000 net tons, a decrease of 7,181,000, or 5.3% from 1966.

World production of raw steel in 1966 totaled 519,842,000 net tons, up from 503,083,000 tons in the preceding year.

United States. Capital outlays for improved operations, including ironmaking, steelmaking, shaping of mill products, and heat treating, were expected to total about $2.45 billion in 1967, about 20% above the 1966 outlays.

Improved boron-treated carbon steels were developed to replace some conventional alloy steels in applications requiring cold extrusion, cold heading, or machining. The developments resulted from consumers' needs for more economical steels, mainly for automotive uses. The strength of plain carbon steels can be significantly increased if amounts of boron as small as a few thousandths of 1% are added along with carbon, manganese, and the incidental alloying elements normally present in carbon steels.

Jones & Laughlin Steel Corporation's works at Cleveland, Ohio, installed an electronic computer to relay information to pulpits (operating stations) of an 80-inch, hot strip mill. The computer measures the thickness and width of the steel strip, the temperature of the metal, and the speed of the mill, and maintains these variables within predetermined limits. It was the first mill to be so equipped with computerized control.

Bethlehem Steel Corporation reported that it had made "chromized sheet steel"—a carbon steel with a chromium diffused coating—to compete with conventional corrosion-resistant materials. The sheet is "chromized" by (1) roller coating a very thin film of tridecyl alcohol on both surfaces of a coil of sheet steel; (2) passing the uncoiled sheet through a fluidized bed containing ferrochrome powder, which adheres to one side of the sheet; (3) reversing the coil travel to apply the powder to the other side; (4) passing the sheet through a single-stand two-high rolling mill to roll-bond the powder to the surfaces; and (5) heating the coil at from 1650° to 1700°F in a hydrogen atmosphere to convert the ferrochrome layers into an iron-chromium alloy.

Canada. The Steel Company of Canada, Ltd., successfully produced test heats (batches) of steel in an electric furnace, using continuously charged reduced iron ore pellets. In those tests, the time for a heat was reduced by as much as 45% in comparison with conventional furnace practice, because the usual refining period was virtually eliminated.

Britain. "Spray steelmaking," developed by the British Iron and Steel Research Association, was sufficiently proved in tests to warrant the formation of a company, Spray Steelmaking, Ltd., to undertake commercial exploitation. In the process, unrefined blast-furnace iron is poured through a water-cooled ring containing oxygen nozzles to supply oxygen initially needed in refining, then into a vessel, within which high-pressure oxygen, from a second oxygen source, atomizes the metal into small droplets and surrounds them with an oxidizing agent, resulting in nearly instantaneous oxidation (refining). Lime, fed with the oxygen, combines with unwanted elements in the iron to form slag. Other additions produce steel of the intended chemical composition.

West Germany. On April 1, Alfred Krupp von Bohlen und Halbach announced that his family's control of the industrial empire it founded would end after 156 years. The Krupp empire was heavily indebted to German banks.

JOHN W. W. SULLIVAN
Consultant in metallurgical engineering

PRODUCTION OF IRON ORE, PIG IRON AND FERROALLOYS, AND RAW STEEL[1]

Country	1966 Iron ore, concentrates and agglomerates (Long tons of 2,240 lb)	1966 Pig iron and ferroalloys (Short tons of 2,000 lb)	1966[1] Raw steel (Short tons of 2,000 lb)
Albania	344,000	...	...
Algeria	3,002,000	...	...
Angola	807,000	...	...
Argentina	93,000	556,000	1,395,000
Australia	7,263,000	5,159,000	6,396,000
Austria	3,425,000	2,420,000	3,539,000
Belgium	123,000	9,151,000	14,667,000[2]
Brazil	17,913,000	2,756,000	3,814,000
Bulgaria	2,303,000	771,000	753,000
Canada	33,069,000	6,951,000	10,003,000
Chile	12,106,000	452,000	586,000
China, Communist	30,511,000[3]	15,432,000	13,700,000
China, Nationalist	...	72,000	275,000
Colombia	591,000	254,000	181,000
Cuba	...	...	50,000
Czechoslovakia	2,451,000	6,889,000	9,983,000
Denmark	39,000	90,000	448,000
Dominican Republic	138,000	...	...
Finland	1,102,000	992,000	425,000
France	54,778,000	17,180,000	21,590,000
Germany, East	1,624,000	2,679,000	4,453,000
Germany, West	9,318,000	28,013,000	38,920,000
Greece	295,000	...	260,000
Guinea	591,000	...	...
Hong Kong	135,000	...	...
Hungary	743,000	1,808,000	2,907,000
India	28,768,000	7,815,000	7,388,000
Iran	59,000	...	...
Ireland	...	...	30,000
Israel	...	...	72,000
Italy	1,232,000	6,915,000	15,017,000
Japan	2,342,000	35,293,000	52,657,000
Korea, North	5,019,000	1,543,000	1,500,000
Korea, South	...	22,000	219,000
Lebanon	2,000	...	20,000
Liberia	16,732,000	...	...[4]
Luxembourg	6,426,000	4,368,000	...
Malaysia	6,358,000	...	...
Mauritania	6,397,000	...	...
Mexico	2,657,000	1,202,000	3,046,000
Morocco	974,000	...	...
Netherlands	...	2,433,000	3,625,000
New Caledonia	295,000	...	...
New Zealand	3,000	...	50,000
Norway	2,264,000	1,240,000	789,000
Pakistan	5,000	...	13,000
Peru	6,102,000	33,000	102,000
Philippines	1,457,000	...	100,000
Poland	3,022,000	6,129,000	10,793,000
Portugal	177,000	281,000	289,000
Rhodesia	1,279,000	286,000	115,000
Rumania	2,618,000	2,337,000	4,009,000
Sierra Leone	2,264,000	...	...
South Africa	6,689,000	3,747,000	3,591,000
Spain	5,010,000	2,590,000	4,189,000
Sweden	27,541,000	2,457,000	5,251,000
Switzerland	79,000	28,000	450,000
Thailand	787,000	...	...
Tunisia	1,250,000	...	...
Turkey	1,614,000	529,000	915,000
USSR	158,458,000	77,161,000	106,422,000
United Arab Republic	492,000	...	350,000
United Kingdom	13,661,000	17,595,000	27,233,000
United States	91,089,000	94,003,000	134,101,000[5]
Venezuela	17,480,000	331,000	713,000
Yugoslavia	2,372,000	1,146,000	2,040,000
Other countries	...	...	408,000
Total (estimate)[5]	605,738,000	371,109,000	519,842,000

[1] Steel in the first solid state after melting, suitable for further processing or sale. [2] Figure includes data for Luxembourg. [3] Estimate. [4] Included under Belgium. [5] United States data exclude steel produced by foundries that reported their output to the Bureau of Census but did not report to American Iron and Steel Institute; 1966 output not available. [6] Detail does not necessarily add to totals because of rounded figures. (Sources: Statistical Quarterly Report for Iron and Steel Industry, West Germany Iron and Steel Federation, Düsseldorf; American Iron and Steel Institute, New York.)

STOCKS AND BONDS

The stock market rebounded in 1967 after a severe drop in the previous year. The recovery carried many issues to record levels by October, when some weakness was encountered. The bond market, which had been in a slump for two years, continued to be depressed. Yields on a variety of issues reached the highest levels since the 1930's.

Stock Prices. Stock prices advanced sharply early in the year, and the climb continued with only minor interruptions through May. Some resistance was encountered in late May and June, but the uptrend resumed in July. A small dip in August was followed by a rally that carried prices to record levels in October. From the January low to the October high, prices, as measured by Standard & Poor's index of 425 industrial stocks, rose by 24%. A decline that began in late October erased a portion of the year's gain.

Market action in 1967, in terms of the Standard & Poor's stock price indexes (1941–43 = 10), is shown in the following table (which includes 1966 ranges for comparative purposes):

	Date[1]	Industrials	Rails	Utilities	500 stock
1966 high	Feb. 9	100.60	56.32	75.37	94.06
1966 low	Oct. 7	77.89	37.91	59.03	73.20
1967 low	Jan. 3	85.31	41.35	62.21	80.38
1967 high	Oct. 9	106.15	51.46	72.59	97.59
1967 close	Dec. 29	105.11	43.71	66.08	96.47

[1] Dates are for industrials. Rail and utility highs and lows in some instances occurred on other dates.

No one factor can be given credit for the advance in stock prices. In part the rise was a technical rebound following the sharp drop that occurred in 1966. Investors were also reaching for stocks as a hedge against inflation. Considerable interest was shown in the more speculative and lower-priced issues, and many of the so-called glamour stocks were also in demand.

Preliminary evidence indicated that institutions enlarged their stock positions during the year. Mutual funds, for example, reduced the portion of their assets held in cash and short-term notes from 7.7% in January 1967 to 5.2% in October.

The volume of trading on the New York Stock Exchange reached a record 2,529,962,472 shares, 33% higher than in 1966.

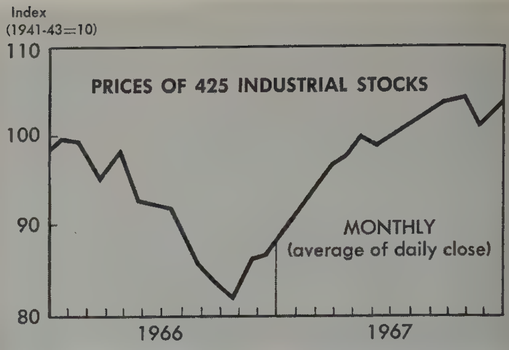
The increase in activity was even greater on the American Stock Exchange, where trading in 1967 was up 66% over 1966.

TEN MOST ACTIVE STOCKS IN 1967—
NEW YORK STOCK EXCHANGE

Stock	Sales	Close	Net change
Sperry Rand	25,550,500	63⅞	+ 34⅛
American Tel & Tel	23,467,200	50⅜	− 4⅝
American Motors	20,001,600	13⅜	+ 7⅛
Brunswick	17,951,400	16⅞	+ 10
Gulf & Western Industries	16,593,100	59¼	+ 25
McDonnell Douglas	16,211,900	54⅝	+ 24½
Occidental Petroleum	16,107,600	110⅝	+ 67¾
Benguet	14,990,800	8½	+ 6¼
Standard Oil New Jersey	14,756,800	67½	+ 4¼
Control Data	14,726,700	136½	+104¼

Earnings and Dividends. The earnings performance of most companies was disappointing. In terms of the industrial stock price index, net income (partly estimated) was about $5.60 a share. This was about 5% below the record $5.88 of 1966.

Dividends increased again in 1967, although the rise was one of the smallest of recent years. Payments reached the equivalent of $3.03 a share on Standard & Poor's index, compared with $2.98 in 1966. At year's end, stocks sold at an average price of 19 times earnings, with an average dividend return of 3%.



Data from Standard and Poor's Corp.

Bond Prices. The bond market, which had been under pressure in 1965 and 1966, continued to decline during most of 1967. Long-term government bonds, for example, moved from an average 4.38% yield basis early in the year to about 5.55% in November. During the same period, yields on high-grade utility bonds rose from 5.03% to 6.14%.

Credit and Interest Rate Influences. The factor primarily responsible for higher interest rates was the surge in demand for credit. Corporations turned increasingly to external sources for financing. The volume of corporate bond offerings reached $16.9 billion in the 9-month period through Sept. 30, 1967, for a rise of 38% over the offerings in the comparable period of 1966.

The high interest rates occurred despite the fact that the Federal Reserve Board followed an easy-money policy during much of the year. The money supply was permitted to increase at an annual rate of 6.4% during 1967. This compared with an average rise of 2.4% in the period from 1957 to 1966. Total reserves of the banking system also expanded.

STEPHEN SANBORN
Publisher Stock Report Services
Standard & Poor's Corporation

STRIKES AND WALKOUTS. See LABOR.

SUDAN

Political developments dominated the scene in Sudan during 1967. The government of Prime Minister Sayyid Saddiq al-Mahdi lost a vote of confidence and was replaced by one led by Mohammed Ahmed Mahgoub. Although unrest continued throughout southern Sudan, elections were held there for the first time in a decade.

Government. On May 15 the 9–month-old coalition government led by Prime Minister Saddiq of the Umma party resigned after losing a vote of confidence, 86 to 112, in the Constituent Assembly. Saddiq's defeat resulted from a conflict between himself and his uncle, the Imam al-Hadi al-Mahdi, the religious leader of the Muslim Ansar sect and political leader of the conservative wing of the Umma party. Without al-Hadi's support the coalition between the Umma and the National Unionist parties dissolved and with it Saddiq's majority.

The underlying cause of the disagreements be-

SUDAN • Information Highlights

ASIA
AFRICA

Area: 967,494 square miles (2,505,813 sq km).
Population: 14,530,000 (July 1, 1967 est.).
Chief Cities (1964 est.): Khartoum, the capital, 173,500; Omdurman, 185,380; Port Sudan, 110,000.
Government: *President of Supreme Council*—Ismail al-Azhari (took office June 10, 1965); *Premier*—Mohammed Ahmed Mahgoub (took office May 26, 1967). *Parliament*—Constituent Assembly, 233 members (party seating, 1966: Umma, 75; National Unionist, 54; Communist, 11; other, 33; vacancies, 60).
Religious Faiths: Muslims, 65% of population; animists, 25%; Roman Catholics, 4%; others, 6%.
Education: *Literacy rate* (1956), 12% of population aged 15 and over. *Total school enrollment* (1965)—600,264.
Finance (1966 est.): *Revenues,* $225,700,000; *expenditures,* $288,600,000; *monetary unit,* Sudanese pound (0.3482 pounds equal U. S.$1).
Gross National Product (1966): $1,359,700,000.
National Income (1965): $1,221,000,000; average annual income per person, $90.
Cost of Living Index (1966): 119 (1958=100).
Manufacturing: Gasoline; cement; sugar; beer.
Crops (metric tons, 1965–66 crop year): Sesame, 160,000 ranks 3d among world producers); sorghum, 1,094,000.
Minerals (metric tons, 1965): Salt, 52,000; iron ore, 35,000; chromite, 30,000; gypsum, 4,290; gold, 300 troy ounces.
Foreign Trade (1966): *Exports,* $203,066,000 (chief exports: cotton; gum arabic); *imports,* $222,400,000 (chief imports, 1965: textile yarn and fabrics; nonelectrical machinery; transport equipment). *Chief trading partners* (1965): Britain (took 10% of exports, supplied 23% of imports); West Germany (took 11% of exports).
Transportation: *Roads* (1964), 5,032 miles (8,098 km); *motor vehicles* (1965), 40,810 (automobiles, 22,960); *railways* (1965), 2,961 miles (4,765 km); *merchant vessels* (1966), 4 (20,000 gross registered tons); *government airline,* Sudan Airways; *principal airport,* Khartoum.
Communications: *Telephones* (1966): 37,019; *television stations* (1967), 1; *television sets* (1967), 10,000; *radios* (1964), 225,000; *newspapers* (1962), 7.

tween Saddiq and al-Hadi were the differences between the traditionalist, religious-oriented views of al-Hadi and the efforts of Saddiq to cope with the modern economic problems in Sudan and the civil war in the south. Saddiq had specifically supported the new constitution recommended on May 10 by the National Commission on the Constitution, which would replace cabinet government by a presidential system with a strong executive elected by popular vote.

On May 26 former Prime Minister Mohammed Ahmed Mahgoub announced the formation of a coalition government consisting of al-Hadi's wing of the Umma party, the National Unionist party, the People's Democratic party, and the Southern Front. Saddiq's followers in the Umma party did not join the coalition, but aligned themselves with other groups to form a parliamentary opposition known as the New Forces Congress.

An important constitutional question was precipitated by the high court of Sudan, which ruled on Dec. 22, 1966, that the proscription of the Communist party by the Constituent Assembly in late 1965 was unconstitutional. The government immediately challenged the authority of the high court to declare the Assembly's action unconstitutional. The controversy came to a head on May 14 when a member of the Communist party won a by-election and sought to take his seat in the Constituent Assembly. He was seated on June 1, but the Assembly refused to rescind its motion of December 1965 excluding eight other Communists from the Constituent Assembly. Chief Justice Babiker Awadalla resigned from the high court on May 18 to protest the Assembly's defiance of the judiciary.

Southern Sudan. Unrest continued throughout the year in southern Sudan. In January hundreds of southerners were killed during violent incidents in Equatoria province and in clashes between the Anyanya rebel guerrillas and units of the Sudan army.

In March, elections were held in the three rebellious southern provinces—Upper Nile, Equatoria, and Bahr el Ghazal—for the first time in 10 years, to fill 36 seats in the Constituent Assembly. These seats had been left unfilled after the 1965 national elections when boycotts and security problems made it necessary to forgo polling in the south. The Umma party won the largest number of seats.

The inclusion of the Southern Front in the new government of Prime Minister Mahgoub in May resulted in attempts to halt the deteriorating situation in southern Sudan by curbing the more repressive measures of the military authorities.

Foreign Affairs. In spite of a state visit to Sudan by Ethiopia's Emperor Haile Selassie in February, the boundary dispute between the two countries remained unsettled. Premier Mahgoub, in New York in July for the emergency session of the UN General Assembly, charged that 150 Ethiopian soldiers had crossed the border into Sudan.

Economy. On January 25, Minister of Finance Hamza Mirghani announced that the government intended to "Sudanize" the import trade by restricting importation to basic commodities and nationalizing foreign-owned importing firms.

ROBERT O. COLLINS
University of California at Santa Barbara

SUGAR

The United States produced a record sugarcane crop in 1967. The sugar beet crop, however, was the smallest in five years.

U.S. SUGAR PRODUCTION: BEETS AND CANE
(In tons)

State	Average (1961–65)	1966	Preliminary 1967
Sugar beets:			
California	5,866,000	5,332,000	4,080,000
Idaho	2,708,000	2,259,000	2,946,000
Colorado	2,627,000	2,335,000	2,094,000
Minnesota	1,300,000	1,554,000	1,422,000
Michigan	1,191,000	1,172,000	1,252,000
Washington	1,391,000	1,283,000	1,063,000
Montana	924,000	1,005,000	1,007,000
Nebraska	1,205,000	1,205,000	854,000
North Dakota	626,000	829,000	853,000
Wyoming	769,000	779,000	845,000
Texas	252,000	592,000	677,000
Oregon	487,000	402,000	488,000
Ohio	422,000	561,000	466,000
Utah	432,000	528,000	460,000
Kansas	280,000	344,000	404,000
Other states	141,000	162,000	455,000
Total	20,621,000	20,342,000	19,366,000
Sugarcane:			
Hawaii	10,305,000	11,150,000	11,228,000
Louisiana	7,541,000	7,101,000	8,662,000
Florida	4,644,000	6,264,000	6,320,000
Total	22,490,000	24,515,000	26,210,000

CENTRIFUGAL SUGAR PRODUCTION BY MAJOR COUNTRIES[1]
(In tons, raw value)

Country	Average 1960–61 through 1964–65	1966–67	Preliminary 1967–68
Argentina	950,000	1,125,000	877,000
Australia	1,806,000	2,564,000	2,726,000
Brazil	3,815,000	4,807,000	4,670,000
Britain[2]	988,000	1,030,000	1,064,000
China, Communist[3]	1,026,000	1,800,000	1,800,000
China, Nationalist	991,000	828,000	900,000
Cuba	5,596,000	6,200,000	5,700,000
Czechoslovakia[2]	1,160,000	1,021,000	805,000
Dominican Republic	852,000	893,000	800,000
France[2]	2,309,000	1,969,000	1,857,000
Germany, West[2]	1,980,000	2,110,000	2,217,000
India	3,694,000	3,002,000	3,500,000
Indonesia	708,000	739,000	772,000
Italy[2]	1,082,000	1,497,000	1,672,000
Mexico	1,899,000	2,679,000	2,465,000
Peru	878,000	882,000	915,000
Philippines	1,704,000	1,725,000	1,917,000
Poland[2]	1,693,000	1,853,000	1,675,000
Puerto Rico	999,000	818,000	750,000
South Africa	1,233,000	1,794,000	2,000,000
Spain[3]	560,000	679,000	753,000
USSR[2]	7,623,000	10,100,000	10,500,000
U.S. (Hawaii only)	1,122,000	1,235,000	1,230,000
U.S. (mainland)			
Beet	2,774,000	2,860,000	2,695,000
Cane	934,000	1,215,000	1,350,000
World			
Cane	34,348,000	40,428,000	40,489,000
Beet	26,577,000	31,036,000	31,488,000
Total	60,925,000	71,464,000	71,977,000

[1] Centrifugal sugar includes cane and beet sugar produced by the centrifugal processes, and is the principal kind used in international trade. Years shown are crop-harvesting years. [2] Beet sugar. [3] Cane and beet sugar.

A total of 25,170,000 tons of sugarcane were produced by the nation's three sugarcane states—Florida, Hawaii, and Louisiana. The 1967 sugarcane crop was up 7% from a year earlier and up 16% from the 1961–65 average.

About 594,300 acres of sugarcane were harvested in the United States in 1967, slightly more than in the previous year. Yields of sugarcane per acre averaged 98.9 tons in Hawaii, 32 tons in Florida, and 27.5 tons in Louisiana.

Sugar beet production totaled 19,366,000 tons in 1967, 5% less than the previous year, and 17% less than the record 1964 crop. Sugar beets were harvested from 1,129,000 acres in 1967, 3% fewer than in 1966. The yield of sugar beets averaged 17.2 tons per acre in 1967, down from the 1966 average of 17.5 tons, but up from the 1961–65 average of 17.1 tons.

As in previous years California, Idaho, and Colorado were the three leading sugar beet producing states.

Approximately 71,977,000 tons of sugar were produced in the world during the 1967–68 crop year, a slight increase from a year earlier. Cane sugar accounted for 56% of production; beet sugar, the remainder. Sugar production increased in Africa, Asia, and Oceania, but dropped in North and South America and in Europe.

Nicholas Kominus
Director of Information,
U. S. Cane Sugar Refiners Association

SUHARTO. See biographical sketch under Indonesia.

SUPREME COURT

During the term that began in October 1966 and ended in June 1967, the Supreme Court of the United States heard arguments in 150 cases, of which 132 were decided by signed opinions and 15 by *per curiam* (unsigned) opinions. Three cases were set for reargument. Justices Tom C. Clark, William O. Douglas, and Byron R. White wrote the greatest number of opinions, 12 each. Chief Justice Earl Warren and Justices Hugo L. Black, William Brennan, Abe Fortas, and Potter Stewart each wrote 11 opinions; Justice John Marshall Harlan wrote 8. The chief dissenter was Justice Harlan, who filed 18 dissenting opinions, followed by Justice Douglas with 15; Justice Stewart, 10; Justice Fortas, 9; Justice Black, 8, Justice White, 5; Justice Clark, 4; Chief Justice Warren, 3; and Justice Brennan, 2.

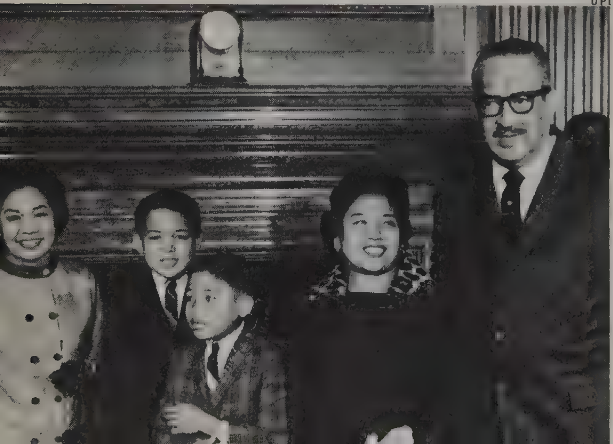
The total number of cases on the Supreme Court's dockets during the term was 3,356. The court disposed of 5 original cases, 310 appellate cases on the merits, 922 petitions for certiorari, and 1,666 miscellaneous docket applications (for a total of 2,903). This left on the dockets at the end of the term 8 original cases, 68 appellate cases awaiting argument, 169 appellate cases pending, and 208 miscellaneous docket applications (a total of 453).

(For a review of the principal decisions of the Supreme Court in 1966–67, see Law.)

The first Negro justice of the Supreme Court in its history, Thurgood Marshall, was sworn in on Oct. 2, 1967. Justice Marshall, born in Baltimore, had been solicitor general of the United States since Aug. 24, 1965 and prior to that a U. S. circuit court judge. He replaced Justice Clark, who retired on June 12, 1967, following the appointment of his son, Ramsey Clark, as attorney general.

Richard L. Hirshberg
Attorney at Law

THURGOOD MARSHALL with his family on October 2, the day he was sworn in as a U. S. Supreme Court justice.



UPI

THURGOOD MARSHALL was sworn in on Oct. 2, 1967, as the 96th justice of the U. S. Supreme Court, succeeding Associate Justice Tom C. Clark. He was appointed by President Johnson on June 13 and confirmed by a Senate vote of 69 to 11 on August 30.

Marshall was born in Baltimore on July 2, 1908. He attended Lincoln University, and, after graduating from Howard University (LL.B., 1933), he began law practice in Baltimore. He joined the staff of the National Association for the Advancement of Colored People (NAACP) as assistant special counsel in 1936 and became special counsel in 1938. Among the 32 cases he argued before the Supreme Court was *Brown v. Board of Education* (1954), resulting in the historic decision declaring public school segregation unconstitutional. Marshall became judge of the U. S. 2d circuit court of appeals in 1961. He was sworn in as U. S. solicitor general on Aug. 24, 1965.

UPI

LEADING HEART SURGEONS Dr. Christiaan Barnard (*left*), Dr. Michael de Bakey (*center*), and Dr. Adrian Kantrowitz discuss a model of the human heart.

SURGERY

Advances in surgery during 1967 were best exemplified by the notable achievements in the area of organ and tissue transplantation and in the development of new surgical techniques for treating heart and liver diseases.

Transplantation. On December 3, 1967, Christiaan Barnard, a surgeon at Groote Schuur Hospital in Cape Town, South Africa, performed the world's first operation in which the human heart was transplanted. This outstanding accomplishment demonstrated that the transplantation of the human heart is technically possible and that the transplanted heart is capable of remarkedly normal functioning immediately following the operation. Three days after Barnard's surgical triumph, Adrian Kantrowitz of the Maimonides Hospital Center in Brooklyn, New York, performed the second transplant of a human heart. Although Barnard's patient died after 18 days and Kantrowitz's patient lived only a few hours the information and confidence provided by these initial trials resulted in additional heart transplants within a few weeks. One of these other heart transplants was performed by Norman Shumway of Stanford University in Palo Alto, California. As a result of these experimental operations, transplantation of the human heart may eventually become an established method of treating patients who are near death because their damaged hearts cannot be repaired through surgery or treated with drugs.

With the exception of kidney transplantation, however, the transfer of a human organ from one individual to another is generally viewed as a clinical experiment. Organ transplantation has unlimited potential, but its widespread use must await the development of new methods for controlling the body mechanisms that work to reject any foreign tissue from the body. Methods of controlling the recipient's rejection of the donor's organ have been limited primarily to the use of drugs and radiation therapy, and more recently to the administration of blood serum from immunized horses. A recent report from the Boston University School of Medicine, however, suggests that the administration of a protein fraction of normal human blood serum will forestall the usual rejection of skin grafts in mice and rabbits. Although this procedure has not yet been tested in human beings, the investigation of this as well as other new methods suggests that consistent success in the transplantation of human organs may be possible.

In another study concerning organ transplantation, it was found that the transplantation of the spleen may be of value in the treatment of patients with hemophelia, a hereditary disease in which repeated hemorrhaging occurs because of a deficiency of the blood-clotting substance known as antihemophilic factor (AHF). From their experiments with swine, researchers from the Harvard Medical School indicated that the spleen is the site of AHF production and suggested the possibility of transplanting the spleen from a normal person into a patient with hemophilia as a means of curing this disease. (A normal person is generally unaffected by the removal of his spleen.)

Outstanding examples of progress in the transplantation of the liver were reported by investigators from the University of Colorado School of Medicine and the Veterans Administration Hospital in Denver. In addition to achieving successful liver transplants in three children, these workers have demonstrated the feasibility of preserving and storing the livers of dogs as long as 8 hours. When implanted into other dogs, the stored livers were able to function well enough to keep the dogs alive.

Heart Repair. A new method was developed for permitting heart surgery in infants too small to use a heart-lung machine. This method, devised by surgeons at the University of Washington in Seattle, includes deep ether anesthesia, a reduction in the carbon dioxide content (and thus the acid content) of the blood, a cooling of the body to 60° F, and a special cooling of the brain by the injection of cold salt solutions into an artery in the neck. By this means, it has been possible to stop the circulation of the blood for as long as 50 minutes without injury to the brain, thereby allowing time for the repair of even the most complex heart malformations.

At the present time, several new techniques are being developed for the purpose of increasing the flow of blood to the muscle of the heart. Working with dogs, surgeons from the Harvard Medical School and Massachusetts General Hospital in Boston have successfully tested a simple and rapid method of directing blood from the left subclavian artery (which arises from the aorta and carries blood to the arm) to the circumflex artery (a branch of the left coronary artery) without actually joining the two blood bessels. This method eliminates the serious technical problems involved in joining two blood vessels and reduces the time needed for the operation.

In this operation, the left subclavian artery is divided and its open end is placed over the circumflex artery. The edges of the subclavian are then sewn to the heart surface. However, when only a few sitches remain to be placed, a segment of the circumflex artery is removed. Because of the tissue attachments to the heart muscle, the cut walls of the circumflex artery retract into the heart tissue, keeping the artery open. The surgeon then finishes stitching the subclavian artery to the heart. Evidence that similar operations in humans may increase the flow of blood to the heart muscle is not yet available, but if the beneficial effect of this type of procedure can be definitely established, millions of people would be candidates for it, and it would probably become the most widely used of all heart and blood vessel operations.

Liver Disease. Hemorrhaging from enlarged veins in the stomach and esophagus is often associated with liver disease. These veins become enlarged because the blood that normally passes through the liver en route to the heart is partially blocked when the liver is diseased, resulting in the shunting of much of the blood into the stomach and esophagus veins.

Until recently, operations to reduce the increased pressure in the enlarged veins have had the undesirable effect of decreasing the already reduced flow of blood through the diseased liver. In 1967, surgeons from the University of Miami (Florida) developed an operation that allows the selective decompression of the enlarged stomach and esophagus veins without decreasing the pressure or flow of blood through the liver.

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SWEDEN

Outstanding events in 1967 included application for associate membership in the European Economic Community, the proposal for constitutional reform of the Riksdag (parliament), political debates on future policies, conversion of right-hand driving on the nation's roads, and the opening of branches of Sweden's four universities.

Political Developments. On March 17 representatives of Sweden's four major political parties agreed on basic reforms for Sweden's constitution. The reforms had been under committee discussion for 13 years. Recommendations include a new unicameral legislature of 350 members to be elected in 1970 and installed in 1971; proportional representation on a national basis to those parties polling more than 4% of the national vote; 3-year terms for all members of parliament (under the present system there are 8-year terms in the upper chamber and 4-year terms in the lower chamber); and a single election day for all candidates. The reforms will have to be agreed upon by the present Riksdag before they can become law, but the Swedish political parties have guaranteed their cooperation in passage of the reforms.

A series of political debates in September and the special meeting of the Social Democratic party in October opened the electoral campaign for 1968, with the Social Democrats indicating possibilities for more government ownership and management of production. Changes in the cabinet brought new figures into prominence: Alva Myrdal (disarmament), Camilla Odhnoff (family affairs), Krister Wickman (economy), and Lennart Geijer (labor).

Foreign Policy. On July 28, Sweden applied for associate membership in the European Economic Community (Common Market) on a basis consistent with its policy of neutrality. Both the meaning of neutrality and the changes that would result from membership in EEC came under close scrutiny by the Swedes, but the cabinet and a large majority in the country supported the move.

Bitter attacks were made on the Vietnam policy of the United States by the Swedish foreign minister Torsten Nilsson, both at the United Nations and at Sweden's Social Democratic party congress in October. Resolutions adopted during foreign policy debates in the Riksdag in the spring also stressed a strong line with regard to Vietnam, with a pledge of support for UN efforts to bring about peace.

Swedish observers were sent to the Suez Canal following the June war at the request of the United Nations, and Sweden urged the other member nations to peace efforts. On the other hand, Swedes paid little attention to the treaty proposed by President Urho K. Kekkonen of Finland which would create a Nordic area free of atomic weapons.

Economy. The Swedish economy continued in both its growth and its inflationary tendencies. Although predictions indicated less of an increase in the gross national product in 1967 than there had been in recent years, there were still growth factors in the economy. Building construction, pulp and forest product industries, and iron ore production showed large increases, while other industries indicated slight gains. The release of corporate investment funds by the government caused the large increase in building activity.

Foreign trade improved considerably in 1967, with a 9% increase in exports during the first half of

SWEDEN • Information Highlights

Area: 173,665 square miles (449,793 sq km).
Population: 7,847,000 (Jan. 31, 1967 est.).
Chief Cities (1966 est.): Stockholm, the capital, 788,503; Göteborg, 421,809; Malmö, 249,161.
Government: *King*—Gustaf VI Adolf (acceded Oct. 29, 1950); *Premier*—Tage Erlander (took office in 1946). *Parliament* (Riksdag)—lower chamber (Andra Kammaren), 233 members (party seating, 1967: Social Democratic, 113; Liberal, 43; Center, 35; Conservative, 33; Communist, 8; Citizen's Organization, 1); upper chamber (Första Kammaren), 151 members (Social Democratic, 78; Liberal, 27; Center, 18; Communist, 2).
Religious Faiths: Evangelical Lutherans, 94% of population; others, 6%.
Education: *Literacy rate,* 99% of population. *Total school enrollment* (1964)—1,278,982 (primary, 828,007; secondary, 180,618; teacher-training, 7,040; .technical, 202,095; higher, 61,222).
Finance (1967 est.): *Revenues,* $6,120,000,000; *expenditures,* $6,142,000,000; *public debt* (1966), $4,488,000,000; *monetary unit,* krona (5.173 kronor equal U. S.$1).
Gross National Product (1966): $21,367,000,000.
National Income (1966): $18,704,000,000; average annual income per person, $2,395.
Economic Indexes (1966): *Industrial production,* 174 (1958=100); *agricultural production* (1965), 106 (1956–67=100); *cost of living,* 133 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 4,764,000; cement, 3,696,000; newsprint paper, 688,800; gasoline (1965), 602,000; wheat flour, 372,000; meat, 338,400; sugar, 218,000.
Crops (metric tons, 1966): Potatoes, 1,267,000; sugar beets, 1,532,000; barley, 1,321,000; oats, 1,077,000; wheat, 540,000; apples (1965), 187,000; rapeseed, 84,000; rye, 84,000; pears (1965), 36,000; dry peas, 8,000.
Minerals (metric tons, 1965): White arsenic, 18,100 (ranks 1st among world producers): iron ore (1966), 28,212,000; lime (1964), 972,000; peat, 290,000; zinc, 77,276; feldspar, 51,000; coal (1966), 39,600; gold, 118,000 troy ounces; silver, 4,955,201 troy ounces.
Foreign Trade (1966): *Exports,* $4,268,500,000 (chief imports: wood pulp, $452,000,000; paper, $401,000,000; wood, $278,000,000; iron ore, $205,000,000); *imports,* $4,584,400,000 (chief imports, 1965: nonelectrical machinery, $540,500,000; transport equipment, $467,000,000; petroleum products, $353,000,000). *Chief trading partners* (1965): West Germany (took 15% of exports, supplied 22% of imports); Britain (took 14% of exports, supplied 15% of imports); Norway (took 12% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 59,869 miles (96,347 km); *motor vehicles* (1965), 1,875,325; (automobiles, 1,732,856); *railways* (1965), 8,347 miles (13,430 km); *merchant vessels* (1966), 433 (4,250,000 gross registered tons); *airlines,* SAS, Linjeflyg; *principal airports,* Göteborg, Malmö, Stockholm.
Communications (1967): *Telephones,* 3,757,495; *television stations,* 109; *television sets,* 2.954,000; *radios* (1965), 2,594.000; *newspapers* (1965), 119 (daily circulation, 3,909,000).

the year. Forest, chemical, steel, transport, and textile industries led the advance. Removal by Britain of surcharges on imports caused an increase of approximately 20% in volume of Swedish exports to Britain. The gross national product and the foreign exchange reserves were the highest in history. The only disappointing area of the economy was agriculture, where total production continued to decline despite an excellent fall grain harvest. The government negotiated a 2-year agreement on agricultural prices and supports.

Other Developments. The conversion on September 3 to right-hand driving created some problems and was widely reported in the foreign press, but it was actually accomplished with relative ease. However, Swedish experts predicted it would take several years before all danger from habitual reactions on the part of the country's former left-hand drivers would pass.

The opening of new branches of Sweden's universities (Uppsala, Lund, Göteborg, and Stockholm) increased possibilities for more student admissions. Örebro, the new branch of Uppsala University, registered nearly 500 students. Other university branches at Växjö (Lund), Karlstad (Göteborg) and Linköping (Stockholm) showed a proportionate increase.

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SWIMMING. See SPORTS.

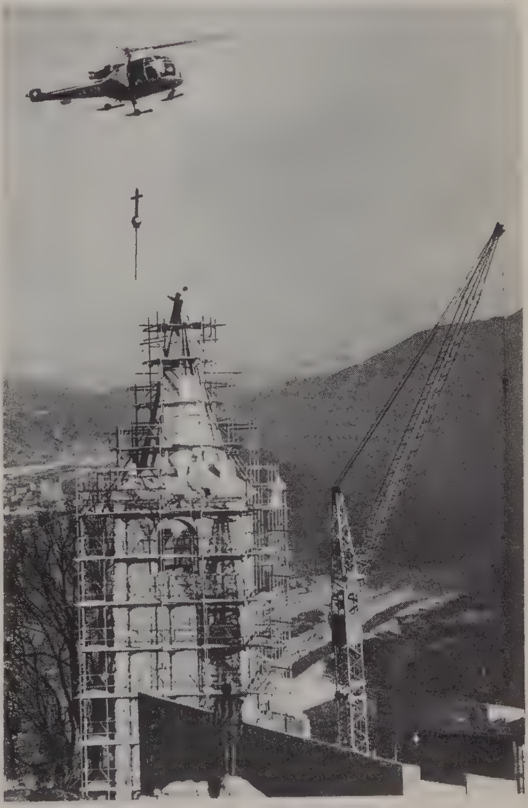
SWITZERLAND

Switzerland was disturbed in 1967 by various problems involving its generally sound economy. Government expenditures increasingly exceeded revenues. There was also a growing opposition among the Swiss people to the increase of foreign labor in Switzerland. In foreign affairs, the majority of Swiss appeared to oppose UN membership for their country.

Economy. The government continued to be faced with a growing gap between revenue and expenditure, created in great part by the general reduction of tariff duties within the European Free Trade Association, of which Switzerland is a member. Since, apart from the defense tax, only the cantonal gov-

A SWISS VILLAGE, Varen, is the scene of an aerial feat in which a helicopter lowers a new cross to the steeple of an ancient church tower, saving workmen many hours.

UPI



SWITZERLAND • Information Highlights

Area: 15,941 square miles (41,288 sq km).
Population: 5,999,000 (July 1, 1966 est.).
Chief Cities (1966 commune est.): Bern, the capital, 165,900; Zürich, 435,300; Basel, 212,200; Geneva, 174,500.
Government: *President*—Willy Spühler (took office Jan. 1, 1968); *Parliament* (Federal Assembly)—Council of States (Ständerat), 44 members (party seating, 1967: Conservative Christian Social, 18; Radical Democrats, 13; others, 13); National Council (Nationalrat), 200 members (party seating, 1967: Social Democratic, 51; Radical Democratic, 49; Conservative Christian Social, 45; others, 55).
Religious Faiths: Protestants, 58% of population; Roman Catholics, 40%; others, 2%.
Education: *Literacy rate,* 99% of population. *Total school enrollment* (1964)—771,310 (primary, 468,664; secondary, 242,249; teacher-training, 10,410; technical, 19,500; higher, 30,448).
Finance (1966 est.): *Revenues,* $1,283,000,000; *expenditures,* $1,368,000,000; *consolidated debt* (1965), $1,182,000,000; *monetary unit,* Swiss franc (4.373 francs equal U. S.$1).
Gross National Product (1966): $14,683,000.
National Income (1966): $12,327,000,000; average annual income per person, $2,055.
Economic Indexes (1966): *Industrial production,* 158 (1958=100); *agricultural production* (1965), 111 (1956–57=100); *cost of living,* 124 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 4,320,000; beer, 439,600; wheat flour, 351,000; crude steel, 345,000; paper, 325,000; lumber, 1,029,000 cubic meters.
Crops (metric tons, 1966): Potatoes, 1,202,000; apples, 370,000; sugar beets, 360,000; wheat, 350,000.
Minerals (metric tons, 1965): Salt, 225,761; lime, 176,585.
Foreign Trade (1966): *Exports,* $3,218,900,000 (chief exports, 1965: watches, clocks, and parts, $418,500,000; electrical machinery, $213,400,000); *imports,* $3,876,200,000; chief imports, 1965: nonelectrical machinery, $380,400,000; road motor vehicles, $244,400,000; iron and steel, $225,500,000). *Chief trading partners* (1965): West Germany (took 18% of exports, supplied 31% of imports); France (took 8% of exports, supplied 15% of imports).
Transportation: *Roads* (1964), 31,300 miles (50,371 km); *motor vehicles* (1965), 1,035,000 (automobiles, 925,000); *railways* (1965), 3,168 miles (5,098 km); *merchant vessels* (1966), 29 (220,000 gross registered tons); *airline,* Swissair; *principal airports,* Basel, Geneva, Zürich.
Communications: *Telephones* (1967): 2,395,123; *television stations* (1967), 25; *television sets* (1967), 850,000; *radios* (1965), 1,654,000; *newspapers* (1965), 132.

ernments may levy direct taxes, the national government was forced to increase taxes on various commodities. This contributed to a general rise in prices, which resulted in a steady cost-of-living increase at a yearly rate of 4%.

The first half of 1967 produced an increase in exports over 1966 of SF498 million (4.373 Swiss francs equal U. S.$1). This 7.4% increase was counterbalanced by a rise in imports of SF594 million (7.2%), with a resultant trade deficit of SF1,636,000,000. This was covered by revenues from "invisible" sources—primarily the tourist industry, foreign investments, and the sale of electric power.

Political Affairs. Swiss men continued to hold the line against female suffrage in 1967. On May 28, the men of Schaffhausen canton rejected a proposal to give women the vote. Only four of Switzerland's 25 cantons allow women to vote, and all women are denied the franchise in national elections.

In a move based partly on a desire for greater industrial efficiency and increased labor productivity, the government decreed a 2% reduction in the temporary foreign labor force. Concern over foreign labor was not purely economic. A proposed constitutional amendment calls for a reduction of Switzerland's foreign residents from 850,000 to 400,000, with a subsequent limitation to 10% of the total population. Although opposed by the government, the proposed amendment nonetheless reflects popular concern, particularly among the German-speaking Protestant majority, over the influx of Roman Catholic labor from Spain and Italy.

The Swiss reacted sharply to French President de Gaulle's statements in July, which seemed to favor separation of Quebec from Canada. They saw this as possibly affecting the attitudes of the French-speaking Bernese of the Jura region, who for some time have sought cantonal autonomy from German-speaking Bern canton.

Foreign Affairs. In March, Switzerland granted a temporary visa to Svetlana Alliluyeva, the daughter of Joseph Stalin, which allowed her to remain in Switzerland while details regarding her permanent residence were arranged.

Although a preliminary government study regarding possible UN membership for Switzerland was begun in June, a poll taken during the summer indicated that the majority of Swiss having any opinion tended to oppose such action. The government, for "reasons of principle," refused to comply with a UN resolution urging the imposition of economic sanctions against Rhodesia.

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SYRIA

Friction on the frontier with Israel, mounting in intensity since 1965, played a major role in triggering the Israeli-Arab war of June 5–10, 1967. In the conflict, the Syrian Arab Republic lost to Israeli occupation nearly 600 square miles (1,550 sq km) of territory on the Golan heights.

A provisional government dominated by the radical wing of the Baath party held power in Syria during 1967. Nureddin el-Atassi and Youssef Zayyen, appointed by a military junta in February 1966, served as persident and premier, respectively.

Border Incidents. Al Fatah, a Palestine-Arab terrorist organization operating from Syria, made repeated raids into Israel during 1966 and early 1967. Reprisals by Israeli armed forces and rifle and artillery fire across the frontier by Syrian troops led to rival complaints to the United Nations in January 1967. The Syrian-Israeli Mixed Armistice Commission met on January 25 and 29 and February 2 but failed to effect a settlement. Border incidents continued, reaching their greatest intensity on April 7 in a series of air clashes. On May 11, Israel informed the UN Security Council that unless Syria altered its "aggressive policy," Israel would regard itself as entitled to act in self-defense.

Preliminaries to War. On Nov. 4, 1966, Syria and the United Arab Republic (Egypt) had entered into a mutual defense pact. On May 14 and 15, 1967, the UAR chief of staff met with Syrian military officials in Damascus to coordinate policies.

Syria mobilized its armed forces, and the UAR moved large numbers of troops into the Sinai Peninsula and closed the Gulf of Aqaba to Israeli shipping. On May 23, King Hussein of Jordan, while breaking diplomatic relations with the Syrian government at the climax of a bitter inter-Arab dispute, declared that Jordan would still support Syria in its confrontation with Israel. On May 24, Iraq joined Syria in a bilateral military pact.

The Israeli-Arab War. When war broke out on June 5 with a massive Israeli attack on the airfields of the UAR, Syria joined in the struggle. By the evening of June 6, Arab air power had been virtually destroyed, but there was little activity on the Israeli-Syrian frontier until June 8. Then the Israeli Air Force began a heavy attack on Syrian fortifications in the Golan highlands. Early on June 9, Syria announced its acceptance of the cease-fire demanded by the United Nations. Fighting continued, however. Only on June 10, after the Israelis had advanced to El Quneitra, 12 miles (19 km) beyond the frontier, did the cease-fire become effective. (See also MIDDLE EAST.)

Aftermath of the War. Syria joined the other Arab states, before the UN Security Council and in the special session of the General Assembly that met between June 17 and July 21, in unsuccessful attempts to brand Israel as an aggressor and to force Israeli withdrawal from all occupied territories. Later, Syria became the most adamant of the Arab belligerents in refusing to recognize Israel or to negotiate a direct peace settlement. It boycotted the Arab summit conference at Khartoum from August 29 to September 1, being unwilling to accept a political rather than a military settlement of the Israeli-Arab quarrel. When the UN Security Council adopted a resolution on November 22 calling for the dispatch of a special representative to the Middle East to promote a peace settlement, and linking Israeli withdrawal from occupied territory with recognition of the sovereignty and territorial integrity of all states in the area, Syria denounced the resolution.

Relations with the United States and Britain were severed on June 6 when the Arabs accused those states of assisting Israel in the war. Meanwhile, Syria retained its ties with the Soviet Union, which helped to reequip the Syrian armed forces.

UPI

SYRIA'S UN delegate, George J. Tomeh (*right*), listens as Gideon Rafael (*left*) of Israel replies to charges made at a Security Council session, June 9, on a cease-fire.

Economic Conditions. Attempts to vitalize the Syrian economy through reorganization of the socialized sector and application of the second 5-year development plan (1965–70) were largely thwarted by political instability, the events of the Israeli-Arab war, and a relatively poor crop year in agriculture. The flow of Iraqi petroleum to Syrian ports and refineries was halted from Dec. 12, 1966 to March 2, 1967, in a dispute with the Iraq Petroleum Company over transit fees. Though a new contract with the company raised the government's receipts by over one half, giving Syria a prospective increase in oil revenues of some $15 million per year plus a lump-sum payment of $11 million, oil flow was again stopped during the war. The influx into the interior of about 70,000 inhabitants of the Golan heights added to Syria's economic problems.

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SYRIA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 71,665 square miles (185,180 sq km).
Population: 5,450,000 (mid-1966 UN est.).
Chief Cities (1965 est.): Damascus, the capital, 599,669; Aleppo, 562,753; Homs, 189,898; Hama, 135,523.
Government: *President*—Nureddin el-Atassi; *Premier*—Youssef Zayyen (both took office by coup, Feb. 23, 1966).
Religious Faiths: Muslims, 82% of population; Christians, 12%; others, 6%.
Education: *Literacy rate* (1960), 35% of population aged 10 and over. *Total school enrollment* (1964)—861,206 (primary, 647,634; secondary, 165,533; teacher-training, 6,364; technical, 7,583; higher, 34,092).
Finance (1966 est.): *Revenues*, $205,000,000; *expenditures*, $205,000,000; *monetary unit*, Syrian pound (3.82 pounds equal U. S.$1).
Gross National Product (1965): $1,125,000,000.
Economic Indexes (1965): *Industrial production*, 158 (1958=100); *agricultural production*, 161 (1956–57=100); *cost of living* (1966), 115 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 681,600; residual fuel oil, 394,000; wine (1964–65), 230,000.
Crops (metric tons, 1966–67 crop year): Wheat, 550,000; barley, 300,000; cottonseed, 240,000; sugar beets (1964–65), 171,000; tomatoes (1964–65), 153,000; cotton lint, 140,000.
Minerals (metric tons, 1965): Asphalt, natural, 56,900.
Foreign Trade (1966): *Exports*, $173,100,000 (chief exports: cotton, $89,400,000; wool, $71,400,000; barley, $9,900,000; wheat, $1,046,000); *imports*, $288,700,000 (chief imports, 1965): crude petroleum, $14,900,000; textile yarn and thread, $13,800,000). *Chief trading partners* (1965): Lebanon (took 22% of exports, supplied 11% of imports); West Germany (took 3% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 5,237 miles (8,428 km); *motor vehicles* (1965), 41,402 (automobiles, 27,103); *railways* (1965), 526 miles (846 km); *domestic airline*, Syrian Arab Airlines; *principal airports*, Aleppo, Damascus.
Communications: *Telephones* (1967): 85,911; *television stations* (1967), 5; *television sets* (1967), 70,000; *radios* (1965), 1,745,000; *newspapers* (1964), 26.

ABILA UTOWI
HII NI NCHI YA WA
WAFANYI
YER
AWAWA
CHEZENI A

WIDE WORLD

TANZANIAN SOLDIERS demonstrate in Dar es Salaam in support of the Arusha Declaration, worked out in January, defining a socialist nationalization program for Tanzanian business and industry.

TANZANIA

On Feb. 5, 1967, President Julius K. Nyerere announced the details of a declaration, worked out at a meeting of the National Executive of TANU (Tanganyika African National Union) at Arusha on January 26–29, explaining socialism as applied to Tanzania. The Arusha Declaration defined Tanzanian socialism as follows: (1) the absence of exploitation; (2) the control of the means of production by peasants and workers; (3) democratic elections; and (4) a firm dedication to socialism as an ideology. To implement the Arusha Declaration, the government commenced upon a program of nationalizing the country's commerce and industry.

Nationalization. In the succeeding weeks the government took control of all banks (except the Cooperative Bank), firms engaged in the processing of food, the National Insurance Corporation, and numerous trading and business companies. It announced its intention to pay fair compensation for all assets and to honor all existing commitments. On February 14–15 the National Assembly unanimously passed the legislation necessary to implement Tanzanian nationalization. On February 27–March 3 a special conference to TANU delegates and the National Executive of the Zanzibar Afro-Shirazi party met in Dar es Salaam to approve the Arusha Declaration and to alter the constitution of TANU to be in accord with that declaration.

YOUNG ATHLETES from all over Tanzania gathered in Dar es Salaam in January to receive training from such experts as U. S. track star Mal Whitfield (*with sunglasses*).

UPI

On January 4 all government officials and TANU committees were directed to use Swahili, rather than English, for official business. It was also announced that residents without valid entry permits would be deported. In the future, entry permits will not be renewed for foreigners whose jobs can be performed by Tanzanians.

A cabinet shuffle in June reduced the number of ministers from 15 to 11. In July there was widespread speculation that an extreme leftist member of the National Assembly had sought unsuccessfully to enlist army officers to overthrow President Nyerere.

Education. To accompany the nationalization of the means of production, President Nyerere in March called for major changes in Tanzania's educational system. Emphasis was to be placed on traditional knowledge, especially pertaining to agricultural life and work. Primary and secondary education was redirected to provide complete education at these levels, and advanced schooling for the selected few was to be "education for service to many." Each school was to be an economic as well as a social and educational institution, integrated with farm or workshop in order to feed the student community and contribute to the total national income. On March 14 the ministry of education ordered that headships in all secondary schools and teacher training colleges be transferred to Tanzanians by the end of April. It was announced that Swahili would be the medium of instruction in primary schools and that public schools at all levels would employ Swahili by 1973. An agreement was signed with Sweden, Denmark, and East Germany for the recruitment and assignment of teachers as well as for training Tanzanians in those countries.

Corresponding efforts were made to involve the University College at Dar es Salaam in Tanzanian socialism. A conference held in Dar es Salaam on March 11–12 recommended that Tanzanian socialism be a required course, supplemented by extracurricu-

TANZANIA • Information Highlights

Area: 362,819 square miles (939,701 sq km).
Population: 10,717,000 (mid-1966 UN est.).
Chief City (1965): Dar es Salaam, the capital, 190,200.
Government: *President*—Julius K. Nyerere (reelected September 1965); *Parliament*—National Assembly, 189 members.
Religious Faiths: Tribal religions, 55% of population, Christians, 22%; Muslims, 22%; others, 1%.
Education: *Total school enrollment* (1964)—658,269 (primary, 633,678; secondary, 19,897; higher, 4,694).
Finance (1967 est.): *Revenues,* $133,000,000; *expenditures,* $164,000,000; *monetary unit,* Tanzania shilling (7.14286 shillings equal U. S.$1).
Gross Domestic Product (1966): $763,000,000.
National Income (1965): $655,000,000; average annual income per person, $64.
Manufacturing (metric tons, 1965): Meat (1962), 87,000; sugar (1966), 84,000; wheat flour, 19,000; beer (1964), 6,400; lumber, 50,000 cubic meters.
Crops (metric tons, 1965–66 crop year): Cassava, 1,050,000; maize, 559,000; sweet potatoes and yams, 250,000.
Minerals (metric tons, 1965): Salt, 35,373; gypsum, 4,500; lime (exports), 1,800; bituminous coal, 1,800; gold, 90,819 troy ounces; diamonds, 828,000 carats.
Foreign Trade (1966): *Exports,* $234,900,000 (chief exports: cotton, $49,000,000; coffee, $42,280,000; *imports,* $179,800,000 (chief imports, Tanganyika only, 1965: nonelectrical machinery, $19,320,000; transport equipment, $17,906,000. *Chief trading partner:* Britain (took 29% of exports, supplied 32% of imports).
Transportation: *Roads* (1964), 21,034 miles (33,850 km); *motor vehicles* (1965), 44,847 (automobiles, 23,448).

lar activities in the TANU Youth League. In addition, a majority of the university staff should approve of Tanzanian socialism and be "East Africanized" as soon as possible. On June 20, President Nyerere permitted 392 students who were dismissed from their school in October 1966 for demonstrating against compulsory service in the National Youth Service to be reinstated in 1968.

Economy. The 1967–68 budget estimated recurrent revenues at £46,950,000 and recurrent expenditures at £94,850,000, the surplus being allocated to the 5-year development plan (1965–69), which has been lagging. Salaries of executives and civil servants were cut 20% and 10%, respectively, to support the policy of Tanzanian socialization. In 1966 the value of exports from mainland Tanzania increased 27% over the 1965 figure of £89.2 million, while imports increased 25% to £80.7 million. Britain continued to be the largest market, accounting for 29% of Tanzania's exports.

In May the U. S. Agency for International Development (AID) extended a $1.6 million, 40-year loan to Tanzania to improve the Great North Road linking Dar es Salaam with Lusaka, Zambia. Also in May the Taw Development Corporation of New York announced plans to establish in Tanzania a $1.3 million meat-processing plant that would handle 12,000,000 pounds (5,400,000 kg) of meat annually.

ROBERT O. COLLINS
University of California at Santa Barbara

TARIFFS. See INTERNATIONAL TRADE.

TAXATION

The suspension of the 7% investment credit for machinery and equipment and speedy depreciation for buildings that began as an anti-inflationary meaure on Oct. 10, 1966, was terminated by the U. S. Congress on March 9, 1967,

The interest equalization tax, originally enacted to help the United States counter its unfavorable balance of payments problem by making it more costly for foreign business and governments to raise capital in the United States, was extended 2 years.

Under a law signed in August, dependency deductions for children of divorced or separated parents can be assigned to either parent by mutual agreement. In the absence of such an agreement, the allocation of the dependency deductions for the children will be determined by objective and relatively simple standards.

Proposed 10% Surtax. On January 10, 1967, President Johnson asked Congress to enact a 6% surtax on individual and corporate income taxes to combat inflation and to help pay for the Vietnam War. Congress took no action on this request. On August 3, President Johnson again requested Congress to enact a surtax, this time at a 10% rate. Again Congress took no action on the request in 1967.

U. S. Supreme Court Decisions. Under a court decision handed down in 1967, a business traveler may not deduct the cost of meals and lodging while away from home on business unless the trip is long enough to require him either to sleep or to rest during the trip. This means that the cost of meals on one-day business trips will generally not be deductible.

In another high court decision, military personnel who are assigned to permanent duty stations away from their family residence are nevertheless not considered "away from home" for purposes of deducting any meal and lodging costs they may personally pay at their duty stations. (See also LAW.)

Other Court Decisions. The loss of a diamond ring is not a deductible casualty, but the accidental destruction of a diamond ring in a garbage disposal unit is a deductible casualty.

The cost of obtaining a professional degree cannot be deducted or amortized over the number of years the individual reasonably expects to be in practice.

Corporations may limit their qualified pension or profit-sharing plans to salaried employees only, if this does not unduly discriminate against hourly employees. Corporations may also set up medical reimbursement plans that discriminate in favor of stockholders-employees, but this may be done only if these plans are geared to the employment relationship rather than to the ownership by the stockholder-employees.

The travel costs of a wife who accompanied the president of a corporation on a foreign business trip were deductible as business expenses because she helped her husband in his duties and also tended to enhance the firm's image abroad.

The U. S. Treasury regulations that bar corporate tax status for professional corporations authorized under various state laws are invalid, according to one district court.

Treasury Rulings. "Points" paid to get a Veterans Administration-insured home mortgage from a lending institution cannot be deducted as interest, do not add to the cost of the property, and are not taken into consideration in determining gain or loss on any subsequent sale of the property.

Contributions to charity are not deductible to the extent that the contributor receives something of value in exchange for his donation.

The cost of oral contraceptives prescribed by a doctor as a medical recommendation for a patient who almost died while giving birth by Caesarean section is deductible as a medical expense.

Residents of a retirement home who pay a fixed, monthly life-care fee can deduct as a medical expense that portion of the fee that is shown by the home's experience to be the cost of providing medical services for the residents.

Treasury special agents who conduct criminal tax fraud investigations were instructed to advise a taxpayer of his constitutional rights to silence and counsel when "preliminary inquiries" fail to resolve the matter and "further investigation becomes necessary."

Revised Treasury regulations were issued to provide more liberal rules for deducting expenses of education, especially as the rules apply to teachers.

Health and accident insurance premiums covering reimbursements for nonmedical risks, such as loss of earnings and accidental death, are deductible as medical expenses for years before 1967. The Treasury conceded this in reversing its long-standing ban against deducting such premiums as medical expenses. For 1967 and on, the Internal Revenue Code specifically bars any medical expense deduction for premiums on this type of accident and health insurance.

The Treasury also conceded that a house bought by a deceased individual in his wife's name is not necessarily part of his taxable estate merely because he lived in the house with his wife. Also, the Treasury removed any lingering doubt and ruled that a divorced wife was entitled to deduct the legal fees she incurred in collecting her alimony.

Revenue Collections. Federal internal revenue collections for the fiscal year 1967 skyrocketed to a new peak of $148,327,000,000, up from $128,880,000,000 for fiscal 1966.

State tax collections reached a record total of $31,910,000,000 for the fiscal year 1967, compared with $29,388,000,000 in fiscal 1966. But most categories of state taxes increased at a lower percentage from 1966 to 1967 than they had from 1965 to 1966. The average per capita state tax rose from $150.60 for the fiscal year 1966 to $161.92 for fiscal 1967. Seven states had per capita taxes of $200 or more; four states had per capita taxes under $120. Hawaii had the highest per capita tax, $297.05; Nebraska had the lowest per capita tax, $95.09.

Local government tax collections for fiscal 1966 rose to a record $27,361,000,000. Property taxes accounted for $23,836,000,000, and sales and gross receipts taxes accounted for $2,041,000,000.

Tax Developments in Other Countries. Argentina increased the minimum tax standard deduction for its personal income tax and offered a 100% credit against income tax for investments in machines and equipment for exploration and extraction of minerals in Argentina. El Salvador encouraged enterprises that establish tourist facilities by exempting the capital invested and the income derived from the enterprise from both national and municipal taxes for periods of 5 to 10 years.

STATE TAX REVENUE IN THE U.S., BY TYPE OF TAX
(Amounts in millions)[1]

Tax source	Fiscal year 1967 (prelim.)	Fiscal year 1966	Fiscal year 1965
Total collections	**$31,910**	**$29,389**	**$26,127**
General sales or gross receipts	8,924	7,873	6,711
Motor fuels	4,839	4,627	4,300
Alcoholic beverages	1,041	985	917
Tobacco products	1,602	1,542	1,284
Insurance	866	813	744
Public utilities	600	552	498
Motor vehicles	2,151	2,079	1,869
Motor vehicle operators	165	157	152
Corporations in general	615	561	528
Alcoholic beverages	138	135	133
Individual income[2]	4,909	4,303	3,657
Corporation net income[2]	2,227	2,038	1,929
Property	862	833	767
Death and gift	795	808	731
Severance	577	545	503
Other	1,598	1,538	1,403

[1] Because of rounding, detail may not add to totals. [2] Individual income tax figures include corporation net income tax amounts for New Mexico for fiscal year 1965–66.

Canada imposed a temporary 5% surtax on individual income taxes and raised the federal tax on tobacco and alcohol by about 10%.

Finland raised its corporate income tax from 42% to 46% on distributed earnings and from 48% to 49% on retained earnings. It reduced its personal income tax slightly in the lower income brackets but increased it progressively in the higher brackets.

India increased its excise taxes on a wide range of products, including coffee, tea, and cigarettes. Indonesia reduced its sales tax to 10% on a wide range of commodities and eliminated the tax on various items, including tea and tobacco leaves. Malaysia adopted a 5% development tax levied on business income. Singapore encouraged foreign investment by applying a 4% instead of a 40% rate to the income of firms that realized 20% or more of their total profit from exports totaling $33,333 or more a year.

Israel cut its purchase tax by 5% to 25% on various items of consumer durable goods, including home refrigeration, gas ranges, and air conditioners. Lebanon exempted new industrial enterprises from income tax for the first six years of operation if the enterprise meets certain tests as to size of investment, number of jobs created, and type of goods produced.

Spain tried to eliminate a large number of small, inefficiently operated industrial firms by granting tax exemption to various types of business mergers and reorganizations. West Germany replaced its turnover tax on transactions and services with a value-added tax, for which the general rate will be 10% on most items.

Mozambique replaced its previous tax system with a new code that includes six basic taxes, one of which is a surtax on income at rates ranging from 3% to 45%.

LEON GOLD
Tax Research Institute of America, Inc.

TAYLOR, Elizabeth. See biographical sketch under MOTION PICTURES.

TEA

World tea production (excluding Red China) totaled a record 2,181,500,000 pounds in 1967. This was a rise of 5,300,000 pounds over 1966, and 272,800,000 pounds more than the 1960–64 average.

TEA PRODUCTION IN PRINCIPAL COUNTRIES
(In pounds)

Country	Average 1960–64	1966	Forecast 1967
ndia	767,700,000	827,700,000	835,000,000
Ceylon	464,700,000	490,100,000	494,000,000
Japan	176,700,000	183,300,000	184,000,000
USSR	92,000,000	123,500,000	120,000,000
ndonesia	98,100,000	103,000,000	103,000,000
Pakistan	53,700,000	62,300,000	65,000,000
Turkey	17,400,000	48,000,000	50,000,000
Kenya	35,800,000	56,000,000	47,000,000
Taiwan	41,700,000	47,400,000	46,000,000
Argentina	20,700,000	35,900,000	40,000,000
Iran	24,400,000	39,700,000	40,000,000
Malawi	28,100,000	33,900,000	34,000,000
Mozambique	21,000,000	30,800,000	31,000,000
World total	1,908,700,000	2,176,200,000	2,181,500,000

Larger crops were registered in most tea-producing nations.

Asia. The Asian crop, which accounts for nearly 90% of world tea production, totaled 1,957,000,000 pounds in 1967, up 12,300,000 pounds from the previous year. Production increased in all Asian nations except Nationalist China and the USSR.

Production in India, the world's leading tea-producing nation, totaled a record 835,000,000 pounds, a rise of 7,300,000 pounds over 1966. Ceylon produced 494,000,000 pounds in 1967, about 3,900,000 pounds more than in 1966. Japan produced a record crop of 184,000,000 pounds, up 700,000 pounds from a year earlier.

Africa. Tea production dropped in Africa. The 1967 crop there totaled 167,500,000 pounds, 11,300,000 pounds less than the 1966 crop. Unfavorable weather conditions reduced the crops in Kenya and Uganda. Production in Kenya, the major African tea-producing nation, dropped 16% from a year earlier.

South America. South American tea production totaled 57,000,000 pounds, up 8% from the previous year, and nearly double the 1960–64 average. Argentina produced a record 40,000,000 pounds. Production also increased in Brazil and Peru.

NICHOLAS KOMINUS
Kominus Agri-Info Associates

TELEPHONE

On May 11, 1967, President Johnson led ceremonies marking the installation of the 100 millionth telephone in the United States. Long distance calling was up 8.4% over 1966 and overseas calling increased by 26%. Users in the United States could place calls to 196 countries and territories, and Bell System operators dialed calls directly to 23 countries. Within the Bell System, over 90% of phones were equipped for direct dialing.

New Rates. Rates for interstate long distance calls were reduced on November 1 for most station-to-station and person-to-person calls beyond 468 miles (695 km). Overseas rates were lowered earlier in the year. New time periods were set, a new late night rate established 75 cents for the first three minutes of cross-country calls not requiring an operator, and holiday rates were set for July 4 and Labor Day, as well as for Thanksgiving, Christmas, and New Year's Day.

The new time periods for station calls are as follows: day rate, 7 A. M. to 5 P. M. weekdays; evening rate, 5 P. M. to 7 P. M. weekdays; night rate, 7 P. M. to 7 A. M. weekdays, all day Saturday and Sunday, and on the five holidays. Time periods for person-to-person calls are as follows: day rate, 7 A. M. to 5 P. M. weekdays; night rate, 5 P. M. to 7 A. M. weekdays, all day Saturday and Sunday, and on the five holidays.

TELEPHONES IN MAJOR COUNTRIES

Country	Telephones Jan. 1, 1967	No. per 100 population	% increase over 1966
Argentina	1,526,767	6.68	1.9
Australia	2,978,336	25.81	6.0
Austria	1,087,007	14.88	7.8
Belgium	1,665,508	17.43	6.4
Brazil	1,431,653	1.67	6.5
Canada	7,880,471	38.91	5.8
Czechoslovakia	1,582,852	11.09	6.1
Denmark	1,411,040	29.09	3.4
Finland	892,300	19.19	6.8
France	6,554,441	13.19	7.2
Germany, East	1,723,814	10.09	3.9
Germany, West	9,532,417	15.89	8.3
Greece	579,076	6.69	13.9
Hungary	597,376	5.86	5.5
India	961,063	0.19	9.0
Italy	6,467,597	12.44	8.1
Japan	16,011,745	16.08	14.4
Mexico	930,940	2.07	13.1
Netherlands	2,512,826	20.05	6.8
New Zealand	1,087,133	39.87	6.1
Norway	945,573	25.09	4.1
Poland	1,411,481	4.44	9.1
Portugal	581,780	6.31	5.7
South Africa	1,260,692	6.86	5.2
Spain	3,072,214	9.60	10.2
Sweden	3,757,495	47.90	5.2
Switzerland	2,395,123	39.25	6.0
United Kingdom	11,376,000	20.70	6.3
United States	98,789,000	49.87	5.5
USSR (est.)	8,400,000	3.58	9.1

Source: *The World's Telephones 1967*, American Telephone and Telegraph Company.

Overseas Service. A successful trial of customer dialing of both person-to-person and station-to-station calls to Paris and London was completed. It now appears that some customers will be able to direct dial overseas by the early 1970's.

By the end of 1967, the Bell System had 170 satellite circuits to Europe, almost double those at the beginning of the year, and 68 transpacific satellite circuits. The satellites supplemented the extensive underseas cable systems and improved the radiotelephone service already in operation. In 1968 the Bell System will place a new 720-circuit transistorized cable between the U. S. mainland and the Virgin Islands. It also plans to add about 430 satellite circuits.

U. S. Cables. The Bell System spent about $4.3 billion on expansion and improvement in 1967. A 1,300-mile (almost 2,100 km) section of a supercapacity cable between Miami, Fla., and Washington, D. C., was opened during the year. Work continued on the section of this cable that will extend to Boston. When completed in 1968, the cable will provide 32,400 additional voice channels. A similar cable system from Massachusetts to Colorado reached well beyond Chicago by the year's end. These cables carry voice, video, and all forms of data, including teletypewriter and facsimile.

Advances. Touch-Tone phones were available in an increasingly large number of areas in 1967. Many banks and other businesses were using these phones as data input devices. Wide Area Telephone Service (WATS), widely used by business, was made available for inward calling. Development of the Dataspeed teletypewriter, which forms individual characters from electronically controlled jets of ink at speeds up to 1,200 words a minute, was announced in 1967.

Electronic switching systems, which are opening the way to the development of custom-tailored telephone service, were serving 19 central offices in 1967, and work continued on installing additional systems.

NADINE GOLLADAY SIMMONS
American Telephone and Telegraph Company

ANASTASIA, the mythical missing Romanoff of Broadway and Hollywood fame, came to television with Julie Harris (*left*) and Lynn Fontanne in a successful *Hallmark Hall of Fame* production.

TELEVISION AND RADIO

TELEVISION AND RADIO

Although no aspect of television programming stirred much interest in the United States in 1967, the signing of the Public Broadcasting Act aroused hope that the situation might improve in the next few years. Engineering developments, on the other hand, showed steady progress in the expansion of ultra-high-frequency television broadcasting, cable television systems, and the use of satellites for relaying television pictures.

TELEVISION AND RADIO PROGRAMS

On November 7, President Lyndon B. Johnson signed into law the Public Broadcasting Act of 1967. This event was the single positive item in a year that otherwise found the television industry doing little to shine up its lackluster image. On the whole, the industry offered nothing to make one anticipate a single half hour of regular programming, and it did nothing to advance the medium itself.

Public Broadcasting. The Public Broadcasting Act was adroitly steered through the Senate by Sen. John O. Pastore of Rhode Island and then passed by the House with far less opposition than had been anticipated. It set up a 15-man corporation to dispense federal and private funds for educational and cultural program production and networking. An initial budget of $9 million was authorized, with long-term financing to be worked out in 1968. Operations actually began with private grants, among them $1 million from CBS and another $1 million from the Carnegie Corporation.

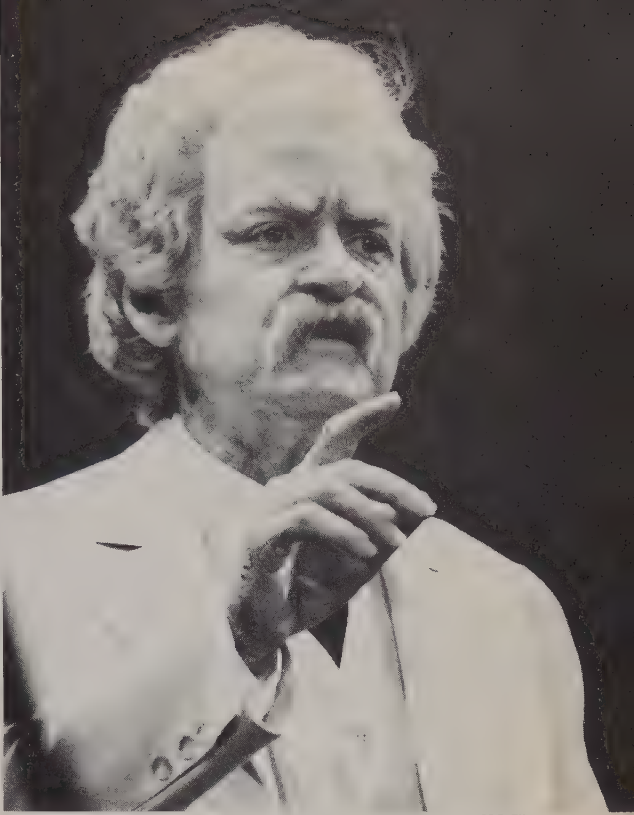
When he signed the bill, President Johnson made the first appointments to the Corporation for Public Broadcasting: James Killian, head of the Carnegie Commission that drew up the plan, and Milton Eisenhower, president of Johns Hopkins and a pioneer in the study of educational television (ETV). At the head of the 100-member National Citizens Committee, which was instrumental in mustering support for the bill, was Thomas P. F. Hoving, director of New York's Metropolitan Museum of Art.

Two days before the signing of the bill, on November 5, the Public Broadcast Laboratory (PBL) made its eagerly awaited debut. Created by the Ford Foundation enterprise, PBL had a 2-year budget of $10 million and an interconnect of 126 possible ETV stations across the country. PBL promises much in the way of experiment, innovation, and content of intellectual consequence, despite criticism of its early shows. It had less than the full station complement for its first broadcast which dealt head-on with issues of race; at least 12 Southern ETV stations refused to carry the program.

On June 25 television reached a milestone—the first global hookup in history, seen in the United States on an interconnect of 80 stations affiliated with NET. The two-hour, all-live program *Our World* presented originations from 19 countries on five continents. It was seen simultaneously in 39 countries by means of four satellites—three U. S. and one Russian.

Network Programming. Even those most directly involved—the program producers and program buyers—knew that the new season promised little that was fresh or exciting. Early ratings bore them out. Of the 24 new programs that found a place among the 97 programs ranked in the Nielsen report of October 27, none placed close to the first 10, and only 6 were able to capture 30% or more of the audience in their respective time periods. The success of *Gentle Ben, The Flying Nun,* and *Ironsides* (with Raymond Burr as the star) was perhaps predictable. However, the surprise success in the early season ratings was *The Carol Burnett Show,* so lightly regarded before the season that the comedienne began with a lineup of only 150 stations.

MARK TWAIN TONIGHT!, Hal Holbrook's remarkable stage recreation, was viewed by television audiences on March 6.


CBS TV

Other shows that seemed likely to last were *The Jerry Lewis Show, The Guns of Will Sonnett, He and She,* and *Mannix.* Most of the new programs could not buck the popularity of movies (which occupied 5 of the first 10 positions in the ratings) and of such established stars as Andy Griffith, Gomer Pyle, Lucille Ball, and Red Skelton. Westerns used to be sure bets on television, but the several new examples of the genre fared poorly.

CBS, which over the years has stuffed its lineup with stars, achieved its predicted triumph over the other networks. But despite average ratings nearly 3 points ahead of NBC and 4 points ahead of ABC, the network faced shrinking profits. The reasons were complex, but among them were the general softening of the economy and the unwillingness of advertisers to pay the higher rates all three networks had been asking. As a result there were, for the first time in a long while, commercial openings in such shows as those of Ed Sullivan and Jackie Gleason.

Only 9 of the 34 programs that made their debuts in September 1966 found their way into the 1967–67 season. The rate of attrition for programs introduced in September 1967 seemed likely to be as great. For the first time in memory, many TV commercials had far more to offer in style and humor than the programs surrounding them.

Scattered among the dismal offerings of regular network programming there were a goodly number of outstanding entertainment specials and public affairs programs. Hal Holbrook's *Mark Twain Tonight!* was artistically memorable and highly successful in terms of audience size. There were fine adaptations of theatrical successes, among them *Anastasia* and *Damn Yankees,* and a preview of at least one pilot, Rowan and Martin's *Laugh-In,* later scheduled to replace one of the faltering September shows. CBS's faith in original television drama was amply justified by Loring Mandel's moving play *Do Not Go Gentle Into That Good Night,* starring Melvyn Douglas. It was seen by an estimated 25 million viewers.

For sheer bulk, movies and sports dominated network programming. Movies filled 12 to 14 hours a week, roughly half of prime time. Because the supply could not meet TV's demand, the networks all made plans to produce films for theater exhibition and eventual video showing, a move that caused the film industry concern and attracted the attention of the Justice Department. Sports events were expected to fill up 796 hours in the 1967–68 season. Here, at least, television demonstrated that it remembered that its greatest strength is immediacy.

Labor. The American Federation of Television and Radio Artists (AFTRA) struck the three networks for 13 days, from March 29 to April 10, over demands that seemed relatively unimportant to the industry at large. At issue were wages and working conditions for newsmen and announcers at owned-and-operated stations and the matter of standby announcers for automated programming in FM. It

NET, "OUR WORLD"

OUR WORLD, the first global television hookup, was seen simultaneously in 30 countries on June 25. Moderator Paul Niven is shown with interpreters in New York.

OUTSTANDING U.S. TELEVISION PROGRAMS OF 1967

(Network Programs, Excluding News Events)

Africa—A special 4-hour documentary on a wide variety of topics pertaining to Africa and Africans today, with narration by Gregory Peck. ABC, Sept. 10.

American Image—A review of American life as seen through the eyes of the nation's artists from the Colonial period to the present. NBC, May 26.

Anastasia (*Hallmark Hall of Fame*)—Lynn Fontanne, Julie Harris, Charles D. Gray, and Robert Burr star in the Mercelle Maurette play dealing with the one claimed survivor of the Russian royal family. NBC, March 17.

Anderson Platoon, The—Pierre Schoendoerffer's front-line documentary study of a unit of American soldiers at war in Vietnam. CBS, July 4.

At the Drop of Another Hat—British satirists, Michael Flanders and Donald Swan, in musical revue adapted from their hit Broadway entertainment. CBS, Dec. 18.

Casals at Marlboro (*Bell Telephone Hour*)—Renowned cellist is shown at work at the Marlboro music festival in Vermont. NBC, Dec. 29.

Crucible, The—Arthur Miller's drama about the Salem witchcraft trials of 1692, with Colleen Dewhurst and George C. Scott. CBS, May 4.

Diary of Anne Frank, The—TV adaptation of the drama about a Jewish girl and her family in hiding in Nazi-occupied Holland. ABC, Nov. 25.

Do Not Go Gentle Into That Good Night (*CBS Playhouse*)—Melvyn Douglas stars in an original drama by Loring Mandel about the problems of old age. CBS, Oct. 17.

Eric Hoffer: The Passionate State of Mind—The longshoreman-philosopher offers lively views on some national problems in an hour-long interview with Eric Sevareid. CBS, Sept. 20.

Evening at Tanglewood, An—Live telecast of concert by the Boston Symphony Orchestra from the annual Berkshire Festival at Tanglewood, Lenox, Mass., featuring works by Mozart, Dvorák, and Saint-Saëns. NBC, Aug. 17.

Expo Observed—A guided tour of Expo 67 in Montreal with commentary on the attractions of the fair. NBC, June 7.

Final War of Olly Winter, The (*CBS Playhouse*)—Ronald Ribman's drama about an American Negro sergeant serving a tour of duty in Vietnam. CBS, Jan. 29.

Gauguin in Tahiti: The Search for Paradise—Sir Michael Redgrave speaks the words of the painter in a special devoted to Gauguin's years in Tahiti. CBS, Nov. 20.

Hall of Kings—A tour of England's Westminster Abbey with dramatic depictions from its colorful history, starring James Mason, Lynn Redgrave, Siobhan McKenna, and Emlyn Williams. ABC, Feb. 14.

Human Voice, The (*ABC Stage '67*)— Ingrid Bergman in Jean Cocteau's one-character drama about the end of a love affair. ABC, May 4.

Israel: Victory or Else—The 6-day Israeli-Arab war and the events precipitating the crisis surveyed in a 90-minute special report. NBC, July 23.

Italians, The (*CBS Reports*)—A study of Italy and the Italian character based on Luigi Barzini's book *The Italians.* CBS, Jan. 17.

Ivan Ivanovich—Documentary account filmed in Russia of a visit with a typical Russian family in the city of Rostov 50 years after the Bolshevik revolution. ABC, Feb. 27.

Jack and the Beanstalk—Cartoon animation-live action musical re-creation of the classic children's tale, starring Gene Kelly. NBC, Feb. 25.

Khrushchev in Exile: His Opinions and Revelations—Exclusive films, photographs, and voice tapes offer a glimpse of the former Soviet premier in retirement. NBC, July 11.

Losers Weepers (*NBC Experiment in Television*)—Original drama by Harry Dolan about a Negro family in the Watts district of Los Angeles, featuring some Watts residents. NBC, Feb. 18.

Man and his Music + Ella + Jobim, A—Musical special starring Frank Sinatra, Ella Fitzgerald, and Antonio Carlos Jobim, Brazilian bossa nova guitarist. NBC, Nov. 13.

Mark Twain Tonight!—Hal Holbrook's classic re-creation of the American author and humorist. CBS, March 6.

Morley Safer's Vietnam—Award-winning correspondent gives his personal impressions of the struggle in Vietnam. CBS, April 11.

National Current Events Test—Audience-participation quiz on events of 1966. CBS, Jan. 3.

National Drivers Test—Third annual program to test viewers' knowledge of traffic safety. CBS, May 23.

New Morality, The: Challenge of the Student Generation—A documentary report on the changing values of the younger generation. CBS, May 7.

Our Endangered Wildlife (*American Profiles*)—Conservation measures and how they have been employed to save the nation's threatened species. NBC, Sept. 29.

Public Broadcast Laboratory—U.S. racial problems are examined in the first of 26 2-hour noncommercial telecasts of news and cultural programs. NET, Nov. 5.

Robert Scott and the Race for the South Pole—Documentary re-creation of the British captain's ill-fated polar expedition. ABC, April 15.

Saint Joan (*Hallmark Hall of Fame*)—French-Canadian actress Genevieve Bujold stars as the Maid of Orleans in a presentation of George Bernard Shaw's play, adapted for television by Robert Hartung. NBC, Dec. 4.

Sid Caesar, Imogene Coca, Carl Reiner, Howard Morris Special, The—Variety special reuniting featured performers of television's *Your Show of Shows.* CBS, April 5.

Theater of the Deaf, The (*NBC Experiment in Television*)—A demonstration of work in progress at the National Theater of the Deaf at Waterford, Conn. NBC, April 2.

Toscanini: The Maestro Revisited (*Bell Telephone Hour*)—A TV profile of the great conductor, narrated by Harold Schonberg. NBC, March 12.

Warren Report, The—Four-part analysis devoted to an examination of the criticisms of the Warren report on the assassination of President Kennedy. CBS, June 25–28.

Where We Stand in Vietnam—Two-part documentary on the problems facing the United States in the Vietnam War. CBS, Oct. 24 and Nov. 11.

Winged World—A study of bird life, made in cooperation with the National Geographic Society. CBS, Dec. 11.

Wyeth Phenomenon, The (*Who, What, When, Where, Why*)—The popular American painter is discussed by his sister, his son, and art critic John Canady. CBS, Oct. 3.

was the consensus of the trade press that AFTRA, striking for the first time in its 30-year history, lost out at the bargaining table, retreating from its hard position on the amount of increases, and giving way completely on the question of FM "featherbedding."

The union's stance was weakened somewhat by the fact that Chet Huntley and a number of other newscasters refused to honor the strike. Huntley stated that his contract with NBC took precedence over his union affiliation. But his broadcasting partner, David Brinkley, honored the strike.

As a side issue of the strike, Johnny Carson, claiming breach of contract because NBC resorted to reruns of old *Tonight* shows, balked at returning after the strike had been settled. He was rewarded for his intransigence with a new contract, giving him a large increase in pay and other benefits.

After eight weeks, a bitterly fought strike against ABC of the National Association of Broadcast Engineers and Technicians (NABET) came to an end on November 22. Major issues—wages and working conditions—were resolved in a 4-year contract. NBC was not involved, having settled on a new contract with NABET in October. In the past NABET contracts with ABC and with NBC have been identical.

Federal Communications Commission. On January 18 the Justice Department dropped a bombshell into the laps of the FCC, requesting a stay in the merger of ABC and the International Telephone & Telegraph Corporation (ITT). Throughout most of 1966 the FCC had considered the application, finally approving the move by a 4 to 3 vote on Dec. 21, 1966, the merger to take effect in 30 days. The Justice Department contended that the FCC had not fully considered the case, and needed to hear Justice Department arguments before deciding.

Thereafter followed what *Variety* called a "bureaucratic ballet" and a "dogfight," resulting in a court hearing on October 18 before a three-judge panel of the U. S. Court of Appeals for the District of Columbia. The panel's duty was simply to rule on whether the FCC had considered the case properly, with a decision to be handed down before the end of the year, at which time the merger agreement was to expire. The court unaccountably delayed its decision, finally announcing that it would make its ruling on Jan. 2, 1968. On January 1, in what has been called a "predawn special meeting," the ITT board voted unanimously to dissolve the merger.

The other major item constantly on the FCC agenda was community antenna television (CATV). The FCC's right to regulate the industry was denied by one court of appeals in 1966, but affirmed by another in 1967. The question was expected to be

CBS TV

DEAR FRIENDS, a two-hour drama on CBS Playhouse, starred (from left) Eli Wallach, Rosemary Harris, Hope Lange, and Pernell Roberts.

settled by the Supreme Court. Meanwhile, the FCC continued its CATV fact-finding and its attempts to deal with unprecedented matters of copyright while awaiting the passage of the new copyright law on which Congress had been working for many years.

Other Notes. In June, John Daly, *What's My Line* moderator and ABC newsman, became director of the Voice of America, succeeding John Chancellor. Chancellor resigned to return to TV news reporting.

The United Network, which had been heralded as the "fourth network," closed down operations after one month (May) of broadcasting its nightly 2-hour *Las Vegas Show.*

The television monopoly enjoyed by KTBC-TV in Austin, Texas, was broken by the signing of KHFI-TV to become an NBC affiliate on Jan. 1, 1968. The KTBC-TV monopoly was an industry scandal because the station is owned largely by President Johnson's family, although the President himself is not a stockholder.

After a 3-year boycott, CBS made its peace with the Television Academy. CBS news and documentary programs will compete again for Emmy awards.

NBC added four newscasters to its *Huntley-Brinkley Report* in the fall of 1967. John Chancellor, Sander Vanocur, Jack Perkins, and Douglas Kiker reported from areas of concern around the nation and the world and also joined in unrehearsed discussions of major events. The addition added depth to an already successful program, and was considered likely to have an effect on the major news programs of the other networks.

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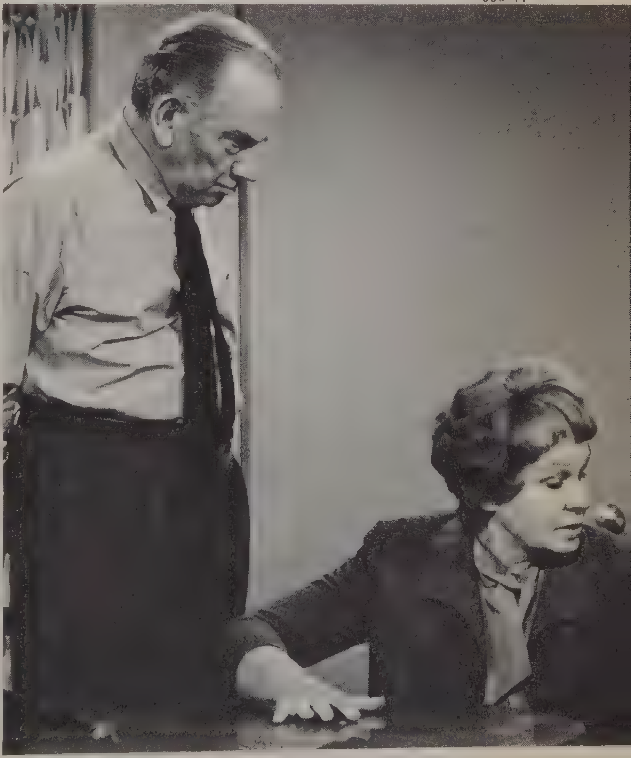
TELEVISION AND RADIO ENGINEERING

The expansion of ultra-high-frequency (UHF) television broadcasting, the growth of cable television (CATV) systems, and the greater use of television relaying by satellite were outstanding trends in television and radio engineering during 1967. New developments included the demonstration of an electronic video recorder and the test of a facsimile system.

Growth of UHF Television. Educational and commercial broadcasters ventured increasingly into UHF television broadcasting in 1967, encouraged by near record sales of 11 million TV sets equipped to re-

CBS TV



STAR PERFORMERS Melvyn Douglas and Shirley Booth appear in *Do Not Go Gentle Into That Good Night,* a 90-minute drama special by Loring Mandel, on CBS Playhouse.

SUMMARY OF WORLD TELEVISION, JAN. 1, 1968

Country	Stations	Number of TV sets	Country	Stations	Number of TV sets	Country	Stations	Number of TV sets
Aden	5	20,000	Gibraltar	1	5,700	Nicaragua	2	25,000
Albania	1[1]	1,000	Greece	1[1]	7,000	Nigeria	8	38,000
Algeria	6	150,000	Guadeloupe	1	2,500	Norway	34	670,000
Antigua	1	3,000	Guatemala	2	60,000	Okinawa	2	153,000
Argentina	31	1,750,000	Haiti	1	10,000	Pakistan	3	30,000
Australia	76	2,700,000	Honduras	5	10,500	Panama	8	83,000
Austria	21	890,000	Hong Kong	2[3]	85,000	Paraguay	1	12,500
Barbados	1	10,000	Hungary	11	1,200,000	Peru	18	300,000
Belgium	16	1,700,000	Iceland	1	24,000	Philippines	14	190,000
Bermuda	2	15,000	India	1	6,000	Poland	19	2,710,000
Brazil	44	5,500,000	Indonesia	4	55,000	Portugal	6	277,000
Bulgaria	1	185,000	Iran	4	120,000	Réunion	1	4,500
Cambodia	2	7,000	Iraq	1	175,000	Rhodesia	2	45,000
Canada	324	5,900,000	Ireland	20	395,000	Rumania	9	570,000
Chile	3	400,000	Israel	1	30,000[4]	Samoa	1	1,000
China, Communist	30	100,000	Italy	64	7,605,000	Saudi Arabia	4	40,000
China, Nationalist	4	100,000	Ivory Coast	1	2,000	Senegal	1	100
Colombia	15	450,000	Jamaica	9	40,000	Sierra Leone	1	2,000
Congo (Brazzaville)	1	500	Japan	153	20,000,000	Singapore	2	94,000
Congo (Kinshasa)	1	7,000	Jordan	...[2]	10,000[4]	Spain	24	2,350,000
Costa Rica	3	75,000	Kenya	3	14,300	Sudan	1	10,000
Cuba	25	550,000	Korea	3	100,000	Sweden	109	2,260,000
Cyprus	2	23,000	Kuwait	2	80,000	Switzerland	25	850,000
Czechoslovakia	28	2,800,000	Lebanon	9	165,000	Syria	5	70,000
Denmark	18	1,200,000	Liberia	1	4,000	Thailand	5	210,000
Dominican Republic	7	75,000	Luxembourg	1	42,000	Trinidad	2	32,000
Ecuador	7	65,000	Malaysia	8	100,000	Tunisia	2	5,500
El Salvador	4	35,000	Malta	1	38,000	Turkey	1[1]	2,000
Ethiopia	1	5,000	Martinique	2	3,000	Uganda	6	8,500
Finland	53	850,000	Mauritius	1	10,000	United Arab Republic	19	475,000
France	91	7,196,000	Mexico	33	2,200,000	United Kingdom	137	15,200,000
French Polynesia	1	1,500	Monaco	1	15,000	United States	784	78,200,000*
French Somaliland	1	...[2]	Morocco	7	51,000	Uruguay	6	200,000
Gabon	2	1,000	Netherlands	13	2,630,000	USSR	126	20,000,000
Germany, East	22	3,600,000	Netherlands Antilles	2	18,000	Venezuela	30	650,000
Germany, West	143	13,500,000	New Caledonia	1	3,000	Yugoslavia	29	850,000
Ghana	4	5,000	New Zealand	16	560,000	Zambia	2	17,000

[1] Experimental [2] Estimate unavailable. [3] Closed-circuit system. [4] Receives programs from neighboring countries. (Source: *Television Factbook.*)

ceive both VHF channels (2 to 13) and UHF channels (14 to 83). Fifty-one new TV stations, including 26 educational stations, went on the air during the year; nearly all broadcast on UHF channels.

Cable Television (CATV) Systems. Cable television, which began as community antenna television for small rural communities in the 1950's, is an increasingly important competitor to both UHF and VHF television broadcasting because it now is also being used to provide improved picture quality and multiple-program choices in metropolitan areas. Cable television systems that provide 12-channel service were becoming commonplace in 1967, and some of these new systems can provide 24-channel service. Most programs carried by CATV are received from regular television broadcast stations, but the cable television companies also sharply increased the number of programs that they originated.

Demands on Radio-Frequency Spectrum. There is an increasing shortage of channels to accommodate greatly expanding needs for mobile radio links for use by fire and police departments, taxi services, public utilities, businesses, and many other radio users. To meet these needs, government and industry undertook studies in 1967 that look toward a reallocation of frequencies, and ultimately toward assigning to mobile radio users some portions of the radio-frequency spectrum now reserved for television and FM radio broadcasting. The same radio-frequency region—from 25 to 890 megahertz (MHz)—is the most suitable for television broadcasting and for mobile radio services.

Communications Satellites. With the launching of additional communications satellites over the Atlantic and Pacific oceans in 1967, international television relaying became more common. Attention was being focused more on the use of communications satellites for television relaying within the United States. Such satellites are easily within the reach of present technology, but agreement must still be reached on questions of public or private ownership, and a choice must be made between satellites that relay television programs only and satellites that provide a complete range of services, including telephone, telegraph, data transmission, and television relaying.

Electronic Video Recorder. CBS Laboratories demonstrated a new electronic video recorder (EVR) that records picture and sound data originating from a television camera, magnetic tape, or a motion picture film. The data are recorded on a new kind of very thin film by means of a special electronic process and then are converted to radio-frequency signals so that they can be received by a standard home TV set to which the EVR is directly connected. In this way, the originally recorded data can be played back at a later time for viewing on the home TV set. Further development of the technique is expected to place the EVR on the world market in 1969 or 1970.

Facsimile System. RCA Laboratories tested a new facsimile system for delivering sports scores, stock market reports, news briefs, and even a facsimile newspaper to facsimile printers in homes. In this system, facsimile signals are transmitted in a television channel along with the regular television program. The signals are received at the home TV antenna and are fed to a printer. The company said that such a service, which does not affect home TV reception, might be available to the public within a few years.

Radio. AM and FM radio broadcasting continued to grow in 1967. The number of AM stations increased from 4,096 to 4,163, and the number of FM stations increased from 1,564 to 1,769. The sale of radios continued at a steady pace; approximately 42 million receivers were sold, about 14 million of them equipped for both AM and FM reception.

HOWARD T. HEAD
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TENNESSEE

The historic law prohibiting the teaching of the theory of evolution in Tennessee schools was repealed by the state legislature in 1967. Also during the legislature's busy 1967 session, state liquor regulations were considerably eased.

"Monkey Law" Repealed. A bill signed by Gov. Buford Ellington on May 18 repealed the law under which John Scopes was convicted and fined in the so-called "monkey trial" of 1925 for teaching the theory of evolution in a public school. Gary L. Scott, a high school science teacher in Jacksboro who had been dismissed earlier in the year for teaching evolutionary theory, was reinstated.

Liquor Laws. The county option system of liquor regulation was modified by the legislature to permit cities of 3,500 or more in dry counties to legalize package stores, and to permit the state's four major metropolitan areas to hold referendums legalizing the sale of liquor by the drink. Nashville area voters adopted the liquor-by-the-drink option, but Memphis voters rejected it.

Other Legislation. Tennessee's legislature appropriated more than $2 billion in public funds, giving considerable increases to highway construction and to education. Because a proposed tax increase program failed to pass in its uncut form, the appropriations were still short of Gov. Ellington's recommendations. The legislature also passed a measure requiring that all property be assessed at 50% of actual value by 1973.

Other legislation updated the mental health program, increased workmen's compensation benefits, created a new court of criminal appeals, and established boards or commissions to coordinate higher education, promote the performing arts, control air pollution, and improve race relations. Because the legislature failed to reapportion the state's nine congressional districts by the federal court's June 1 deadline, the court imposed its own plan.

Race Relations. Although Tennessee remained relatively quiet during a summer of widespread racial violence elsewhere, there were riotous demonstrations in April at two predominantly Negro universities in the Nashville area. Students at Fisk University and at Tennessee A. and I. State University clashed with police for three nights, April 8–10. Minor incidents set off the demonstrations in an atmosphere made tense by controversy over the appearance in Nashville of black power advocate Stokely Carmichael, who spoke at predominantly white Vanderbilt University on April 8. Several demonstrators suffered gunshot wounds, and more than 40 were arrested.

A "liberation school" at St. Anselm's Episcopal Center in Nashville aroused controversy that resulted in the suspension of the school. The school, supported by federal antipoverty funds, was accused of teaching Negroes to hate whites.

The U. S. Civil Rights Commission reported in August that Tennessee ranked second among Southern states in effective school integration. The Tennessee Education Association merged with the state's Association of Negro Teachers, and white and Negro Methodist Conferences also were merged.

Economy. Several economic indicators—such as cotton consumption, cash receipts of farmers, nonresidential construction, new car registrations, and level of employment—declined during the first eight months of 1967. More hopeful signs were the rise in the number of new industries and the growth of tourism. The Tennessee Valley Authority (TVA) began construction of the Tellico Dam on the Little Tennessee River.

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University of Tennessee

TENNESSEE • Information Highlights

Area: 42,244 square miles (109,412 sq km).
Population: 3,888,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Nashville, the capital, 261,000; Memphis, 525,000; Knoxville, 181,000; Chattanooga, 127,500; Jackson, 34,400; Kingsport, 34,000.
Government: *Chief Officers*—governor, Buford Ellington (Democrat); lt. gov. and speaker of the Senate, Frank Gorrell (D); secy. of state, Joe C. Carr (D); atty. gen., George F. McCanless; treas., Charlie Worley; Dept. of Educ. commissioner, J. Howard Warf; chief justice, Hamilton S. Burnett. *Legislature*—(convened May 26, 1967): Senate, 33 members (8 Republicans, 25 Democrats); House of Representatives, 99 members (41 R, 58 D).
Education: *School enrollment* (1965–66)—public elementary, 595,000 pupils (19,500 teachers); public secondary, 315,000 pupils (11,700 teachers); nonpublic schools, 35,600 pupils (1,820 teachers); college and university (fall 1965), 99,989 students. *Public school expenditures* (1965–66)—$299,700,000 ($361 per pupil); average teacher's salary, $5,100.
Public Finance (fiscal year 1966–67): *Revenues,* $739,579,624 (3% sales tax, $173,731,932; motor fuel tax, $5,060,898; federal funds, $247,013,617). *Expenditures,* $732,809,965 (education, $309,716,395; health, welfare, and safety, $149,136,864; highways, $193,335,120). *State debt,* $191,820,000.
Personal Income (1966): $8,611,000,000; average annual income per person, $2,227.
Public Assistance (fiscal year 1967): $80,761,639 to 149,090 recipients (aged, $38,317,995; dependent children, $28,176,648).
Labor Force (employed persons, annual average, 1966): *Agricultural,* 152,300; *nonagricultural* (wage and salary earners), 1,188,700 (35.9% manufacturing, 19.5% trade, 16.8% government). *Unemployed persons* (annual average, 1966)—51,500.
Manufacturing (1965): Value added by manufacture, $4,096,238,000 (transportation equipment, $133,981,000; primary metals, $200,758,000; nonelectrical machinery, $140,819,000; electrical machinery, $313,495,000.)
Agriculture (1966): *Cash farm income,* $670,307,000 (livestock, $345,491,000; crops, $257,815,000; govt. payments, $67,001,000). *Chief crops* (tons)—hay, 1,944,000; corn for grain, 1,032,000; soybeans, 597,520.
Mining (1966): *Production value,* $182,584,000. *Chief minerals* (tons)—phosphate, 5,413,544; zinc, 3,391,847; copper, 1,601,311; limestone, 1,143,801.
Fisheries (1965): *Commercial,* 8,986,000 lb. ($936,000).
Transportation: *Roads* (1967), 76,859 miles (123,666 km); *motor vehicles* (1966), 1,842,275; *railroads* (1965), 3,400 track miles (5,472 km); *airports* (1966), 71.
Communications (1967): *Telephones,* 1,534,700; *television stations,* 18; *radio stations,* 146; *newspapers,* 31 (daily circulation, Sept. 1966, 1,115,661).

TENNIS. See SPORTS.

TEXAS

The regular biennial session of the legislature dominated public affairs in Texas in 1967. Torrential rains and floods did heavy damage to southern areas of the state in September. To the surprise of almost all observers, Gov. John B. Connally announced on November 10 that he would not be a candidate for a fourth term in 1968.

Legislation. On the whole, the legislature's performance was not an impressive one. Tentative attempts were made to deal with such long-standing problems as industrial safety, air and water pollution, and an underpaid and undermanned state civil service. A new consumers' credit code was enacted, but the lenders, especially bankers, seemed more enthusiastic about it than the borrowers.

The first comprehensive voter registration law was enacted to replace the defunct poll tax as a prerequisite for voting, but the state's tradition of a restrictive approach to the franchise was left intact by continuing to have a very early (January 31) deadline for voter registration and by requiring annual registration. The legislature made its fourth

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MODEL of HemisFair '68 on display in San Antonio shows the 622-foot Tower of the Americas, the San Antonio civic and convention center (*foreground*), and the United States Pavilion (*far right*).

HemisFair '68 in San Antonio

Downtown San Antonio, Texas, is the site of HemisFair '68, a new world's fair due to run from April 6 to Oct. 6, 1968. Planned to coincide with the 250th anniversary of the city, the fair was well under construction by the end of 1967. With its announced theme, "The Confluence of Civilizations in the Americas," the fair has attracted exhibits from many nations in the Americas, from European countries, and from the Far East.

TOWER OF THE AMERICAS and the San Antonio civic and convention center buildings neared completion in December.

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effort in as many sessions to enact valid laws for congressional and state legislative districting, with results sufficiently debatable to cause plaintiffs once more to head toward the federal courthouse.

A deadlock between the governor and the lieutenant governor (who is the leader of the state Senate) on the issue of state taxing and spending was broken by a compromise that provided for the enactment of the necessary appropriation and revenue measures for only the first year of the biennium, with action for the second year postponed until a special legislative session sometime in 1968. The Texas Municipal League persuaded the legislature to adopt a law allowing cities to levy a 1% sales tax in addition to the 2% collected by the state. By the end of the year, voters in some 150 cities and towns of various sizes had approved the new tax.

A number of pressing problems—such as the generally low level of state services, unemployment and poor wages among the principal minority groups, and automobile insurance—were not dealt with at all. Legislation aimed at the problem of highway safety was enacted, but represented only a modest step forward. Several issues that had been expected to come up did not, among them proposals for a 4-year term for the governor and legalization of the sale of liquor by the drink.

Special Elections. Republican fortunes in Texas received a modest boost in special elections to fill vacancies in the state legislature. Republican candidates won a Senate seat and three of the six vacancies in the House. At a special election in November the voters approved six amendments to the much-patched state constitution. An attempt to ensure revision of that cumbersome document failed when Lt. Gov. Preston Smith blocked action in the Senate; the commission created as a substitute is not expected to accomplish much.

Politics. The announcement by Governor Connally that he will not seek reelection resulted in the most unsettled political situation since he won office in 1962. At the end of the year, Lieutenant Governor Smith was the only announced gubernatorial candidate, but prospective entries from both parties were jockeying for position.

Minority Groups. There was no great improvement in the condition of Negroes and Mexican-Americans in Texas in 1967, but, despite several small riots in Houston, the racial situation seemed

TEXAS • Information Highlights

Area: 267,338 square miles (692,406 sq km).
Population: 10,873,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Austin, the capital, 220,000; Houston, 1,100,000; Dallas, 790,000; San Antonio, 645,000.
Government: *Chief Officers*—governor, John B. Connally (Democrat); lt. gov., Preston Smith (D); secy. of state, John Hill (D); atty. gen., Crawford C. Martin (D); treas., Jesse James; comm. of educ., J. W. Edgar; chief justice, Robert W. Calvert. *Legislature* (convened Jan. 10, 1967)—Senate, 31 members (1 Republican, 30 Democrats); House of Representatives, 150 members (3 R, 147 D).
Education: *School enrollment* (1965–66)—public elementary, 1,866,356 pupils (57,600 teachers); public secondary, 650,986 pupils (43,400 teachers); nonpublic, 168,400 pupils (6,430 teachers); college and university, 294,529 students. *Public school expenditures* (1965–66)—$1,011,000,000 ($450 per pupil); average teacher's salary, $5,950.
Public Finance (fiscal year 1967): *Revenues*, $2,960,494,792 (2% sales tax, $259,434,525; motor fuel tax, $256,319,471; federal funds, $574,357,169). *Expenditures*, $2,967,709,442 (education, $939,586,273; health, welfare, and safety, $338,358,577; highways, $543,120,456). *State debt*, $336,740,043 (Aug. 31, 1966).
Personal Income (1966): $27,319,000,000; average annual income per person, $2,542.
Public Assistance (fiscal yr. 1967): $207,957,887 to 351,432 cases (aged, $169,597,459; dependent children, $26,481,839).
Labor Force (employed persons, Aug. 1967): *Agricultural*, 325,400; *nonagricultural* (wage and salary earners), 3,845,800 (17.5% manufacturing, 25.3% trade, 15.4% government). *Unemployed persons* (Aug. 1967)—127,500.
Manufacturing (1965): Value added by manufacture, $8,611,722,000 (transportation equipment, $874,997,000; primary metals, $525,662,000; machinery, $1,041,012,000; fabricated metals, $421,145,000; food and products, $1,029,724,000).
Agriculture (1966): *Cash farm income*, $3,150,317,000 (livestock, $1,385,274,000; crops, $1,313,309,000; govt. payments, $451,734,000). *Chief crops* (tons)—sorghum grain, 8,727,488 (ranks 1st among the states); cottonseed, 1,332,000 (rank, 1st); rice, 1,060,500 (rank, 1st); cotton lint, 762,000 (world rank, 1st); wheat, 2,179,560.
Mining (1966 est.): *Production value*, $5,074,764,000 (ranks 1st among the states). *Chief minerals* (tons)—stone, 39,176,000; sand and gravel, 33,800,000; salt, 8,273,000; sulfur, 3,761,000; crude petroleum, 1,074,700 barrels; natural gas, 6,925,900,000,000 cubic feet.
Fisheries (1966): *Commercial catch*, 122,810,000 pounds ($42,730,790). *Leading species*—shrimp, 69,906,700 pounds ($38,484,900); oysters, 4,725,200 pounds ($1,837,607).
Transportation: *Roads* (1967), 247,300 miles (397,906 km); *motor vehicles* (1967), 6,291,873; *railroads* (1965), 20,343 track mi. (32,738 km); *airports with scheduled serv.* (1967), 27.
Communications (1967): *Telephones*, 4,844,000; *television stations*, 46; *radio stations*, 354; *newspapers*, 99 (daily circulation, 1966, 3,054,156).

relatively stable. The legislature's repeal of school segregation laws had symbolic value only. The Rio Grande Valley farm workers' strike—the chief symbol of Mexican-American discontent—finally petered out, but the major grievances of the state's largest minority group remained.

Hurricane and Flood Disaster. Hurricane Beulah struck the Texas Gulf coast on September 20, touching off tornadoes and creating conditions that brought five days of torrential rains and flooding of a 29-county area. The disaster resulted in 14 deaths in Texas and property damages estimated at $225 million.

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TEXTILE INDUSTRY

The U. S. textile industry supplied enough material in 1966 to provide each person in the country with an average of 25.1 pounds of cotton, 20.1 pounds of man-made fiber, and 2.6 pounds of wool. The total, 47.8 pounds per person, represents an increase of 6% over the 1965 total of 45 pounds.

Fiber Consumption. U. S. mill consumption of fibers in the first six months of 1967 was 8.7 billion pounds, or 2% less than 1966. Based on half-year data, the annual rate of mill consumption in 1967 showed raw cotton down 1%, raw wool off 10%, raw silk down 30%, and man-made fibers 2.5% lower. Thus cotton continued to lead in pounds consumed in 1967, accounting for 53% of the total fiber; man-made fibers made up 43% and raw wool 4% of the total.

SELECTED U. S. TEXTILE INDUSTRY DATA

	1964	1965	1966	First Half 1967
Fiber Consumption		(millions of pounds)		
Raw Cotton	4,255	4,453	4,621	2,297
Raw wool, total[1]	355	387	370	166
Apparel class	233	275	267	126
Carpet class	122	112	103	40
Raw silk	5	4	4	1
Man-made fibers[2]	3,071	3,506	3,879	1,891
Rayon+acetate yarn	768	782	781	356
Rayon+acetate staple	748	768	810	353
Noncellulosic yarn[3]	798	928	1,082	547
Noncellulosic staple[4]	536	760	892	493
Textile glass fiber	221	268	314	142
Total fibers	7,686	8,350	8,874	4,355
Tire Cord and Fabric Output[5]				
Cotton	...	...	...	...
Nylon+polyester	237	260	315	147
Rayon	210	213	187	58
Total tire cord and fabric	447	473	502	205
Broad Woven Fabric Output[6]		(millions of linear yards)		
Cotton fabrics	8,966	9,238	8,840	4,359
Man-made fiber fabrics	3,516	3,899	4,172	2,048
Woolen and worsted fabrics	255	267	265	124
Silk fabrics	20	19	18	8
Paper and other fabrics	10	8	6	3
Total broad woven goods	12,767	13,431	13,301	6,542

[1] Clean basis. [2] U.S. producers' domestic shipments plus imports for consumption. [3] Includes acrylic, nylon (polyamide), olefin (polyethylene and polypropylene), saran, spandex, vinyon (polyvinyl chloride) and TFE-fluorocarbon fiber. [4] Includes acrylic and modacrylic, nylon, olefin, polyester, and vinyon. [5] Excludes chafer fabric. [6] Except tire fabrics and carpets, rugs, and felts. (Source: Textile Economics Bureau, Inc.)

The total value of the four fibers consumed domestically was estimated at $4.6 billion in 1966. Man-made fibers led with $3 billion, followed by raw cotton with $1.1 billion, raw wool with $500 million, and silk with $33 million.

Broad Woven Fabric Output. Based on data covering the first half of 1967, the year's cloth output was expected to be about 2% less than 1966 for cotton and the man-made fibers; wool was expected to be some 6% lower. U. S. production of broad woven fabric in 1966 totaled 13.3 billion linear yards, or 1% less than in 1965.

Prices. The average price of 1-inch middling raw cotton for the first nine months of 1967 was 22.4 cents per pound, and raw wool (clean basis, at Boston), $1.22. Rayon staple and 150 denier rayon yarn remained at 28 and 85 cents.

Employment and Weekly Earnings. During the first half of 1967, employment in U. S. knitting and weaving mills and in finished textile products plants averaged 2,082,000 workers. Weekly earnings of mill workers averaged $81.61, while workers in the apparel cutting and related trades averaged $71.62.

Imports and Exports. During 1966, the U. S. textile import balance of $609 million was the largest ever recorded. Exports of all textile fibers and products were valued at $1,279,000,000 and imports at $1,888,000,000.

Flax and Linen Imports. Imports of raw flax and linen yarns totaled 13.9 million pounds in 1966, while imports of linen and chiefly linen fabrics totaled 29.9 million pounds.

Canadian Textile Developments. Canadian fabric shipments totaled 507 million square yards in 1966, of which 289 million square yards were cotton, 35 million square yards wool, and 183 million square yards man-made fiber fabrics. Production of rayon and acetate yarn and staple in 1966 totaled 99.9 million pounds; noncellulosic fiber production was 99.3 million pounds.

STANLEY B. HUNT
President, Textile Economics Bureau, Inc.

WIDE WORLD

U. S. B-52 HEAVY BOMBERS arrive at Utapao Air Base in southern Thailand for the first time in April. From here they made frequent bombing raids on South Vietnam.

THAILAND

Thailand remained prosperous in 1967, and, despite its concern with communism, the country seemed free of a serious threat to its stability. Thailand and the United States tightened their political and military ties during the year.

Fight Against Communism. Thailand continued its anti-Communist campaign in 1967. For most of the year the Hanoi-backed Patriotic Front concentrated its activities in seven northeastern provinces—Sakon Nakhon, Nakhon Phanon, Udon, Ubon, Nong Khai, Kalasin, and Loei. These provinces are located along the Mekong River, which forms Thailand's border with Laos for over 500 miles (805 km).

At the end of the year it was reported that guerrilla activity in the northeast had declined. However, there were terrorist outbursts in south and central Thailand during the summer and fall. The government declared martial law in five provinces in this area in December.

Many Thai officials feel that the solution to Communist infiltration at home depends on the containment of communism in neighboring lands. In line with this sentiment, Premier Thanom Kittikachorn announced in January that Thailand would send a task force to South Vietnam. The first Thai regiment, of 1,200 men, arrived there in September.

U. S. Relations. In March the government publicly admitted that Thailand was being used as a base for U. S. air strikes against North Vietnam. Later it also announced that U. S. B-52 bombers would be stationed in Thailand, and that the government would send combat troops to Laos to fight Communist insurgents there should it be requested to do so.

In 1967, U. S. military aid to Thailand amounted to $60 million. The United States equipped and serviced the 90,000-man Thai army and provided about half of the armed services' budget.

The number of U. S. combat troops in Thailand leveled off at 45,000. The United States also maintained seven operational airbases in the country, the largest of which is at Utapao. Nearby, at Sattahip, a naval base was under construction.

King Bhumibol Adulyadej and Queen Sirikit visited the United States June 7–29. The king and President Johnson discussed Southeast Asia and security conditions in Thailand.

Regional Affairs. Thailand increased its anti-Communist commitment in 1967 and called for other nations to take a firm stand against communism in Southeast Asia. At the opening session of

THAILAND • Information Highlights

Area: 198,455 square miles (514,000 sq km).
Population: 31,508,000 (mid-1966 est.).
Chief Cities (1963 urban est.): Bangkok, the capital, 1,608,305; Thonburi, 459,555.
Government: *King*—Bhumibol Adulyadej (acceded June 9, 1946); *Premier*—Thanom Kittikachorn (took office Dec. 8, 1963). *Parliament*—Constituent Assembly, 240 members.
Religious Faiths: Buddhists, 93% of population; Muslims, 3%; Confucians, 2%; others, 2%.
Education: *Literacy rate* (1960), 68% of population aged 15 and over. *Total school enrollment* (1964)—4,916,748 (primary, 4,500,207; secondary, 311,664; teacher-training, 14,612; technical, 38,228; higher, 52,037).
Finance (1967 est.): *Revenues,* $642,100,000; *expenditures,* $864,700,000; *public debt,* $559,400,000; *monetary unit,* baht (20.75 bahts equal U. S.$1).
Gross National Product (1966): $4,407,000,000.
National Income (1966): $3,798,000,000; average annual income per person, $121.
Economic Indexes: *Agricultural production* (1965), 158 (1956–57=100); *cost of living* (1966), 106 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 1,483,200; sugar (1966), 212,000; cotton yarn, 21,600.
Crops (metric tons, 1966–67 crop year): Rice, 11,800,000 cassava, 2,340,000; maize, 1,200,000.
Minerals (metric tons, 1966): Iron ore, 691,200; lignite, 171,600; salt (1965), 99,770; fluorspar (1965), 51,829.
Foreign Trade (1966): *Exports,* $696,200,000 (chief exports: rice, $193,700,000; rubber, $89,700,000; tin, $63,400,000); *imports,* $1,170,600,000 (chief imports, 1965: cotton fabrics, $210,300,000; nonelectrical machinery, $83,800,000; motor vehicles, $75,000,000). *Chief trading partners* (1965): Japan (took 18% of exports, supplied 32% of imports); U. S. (took 6% of exports, supplied 20% of imports); Britain (took 4% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 7,130 miles (11,474 km); *motor vehicles* (1965), 167,084 (automobiles, 93,083); *railways* (1965), 2,235 miles (3,597 km); *merchant vessels* (1966), 12 (26,000 gross registered tons).
Communications: *Telephones* (1966): 86,008; *television stations* (1967), 5; *television sets* (1967), 210,000; *radios* (1964), 1,610,000; *newspapers* (1965), 23 (daily circulation, 398,000).

the SEATO meetings in Washington, D. C., on April 18, Thai Foreign Minister Thanat Khoman assailed France and Pakistan for not sending military forces to Vietnam.

Two Southeast Asian regional conferences were held in Bangkok during the year. The Asian and Pacific Council (ASPAC) met in the capital in July, but remained uncertain about its future role in Asia. A new regional group, the Association of Southeast Asian Nations (ASEAN), was formed in Bangkok on August 6–8. The purpose of the association is to promote social, cultural, and economic cooperation among its members. ASEAN also has hopes of eventually becoming an Asian common market.

Domestic Affairs. The government of Field Marshal Thanom Kittikachorn took a step toward greater political freedom in October, when it announced that the first elections since 1957 would be held. On December 23 about 75,000 Thais voted for 1,920 municipal council members. The election did not test the government; rather, it was considered a trial run for the 1968 national elections.

The 1965 constitutional draft was revised in 1967, but was not yet promulgated. The draft provides for an elected house of representatives and an appointed senate. Some officials believe that an elected legislature might help reduce the widespread corruption in government.

Economy. Thailand's currency remained one of the stablest in Asia in 1967. The country was reported to have had a favorable balance-of-payments surplus of $170 million in 1966, despite a slight drop in the export of rice. A new economic plan, the 1967–71 development plan, is aimed at raising the gross national product 7% or more a year.

Carl Leiden
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THANT, U

Burmese diplomat and secretary-general of the United Nations: b. Pantanaw, Burma, Jan. 22, 1909.

On Dec. 18, 1967, UN Secretary-General U Thant stated that "in the past 12 months I have seen more crises and greater international tension than I can recall at any time during the 11 years I have spent at and with the United Nations." In addition to being concerned with the long-standing problems of South Africa, South West Africa, and Southern Rhodesia, U Thant was busy during the year trying to put an end to hostilities in Vietnam, the Middle East, and Cyprus.

Vietnam. Although aware that his ability to end the Vietnam War depended on a shift in policies of the major powers, U Thant continued to press for negotiations in 1967. He urged the indefinite and unconditional prolongation of the Vietnamese *Tet* (New Year) cease-fire in February. In March he conferred with representatives of Hanoi and the Vietcong in Rangoon, Burma, and upon his return to New York he urged a "standstill truce," preliminary talks, and reconvening of the Geneva conference. He went so far in May as to predict a third world war growing out of the Vietnam conflict, and in September he stated that unless there was a cessation of the bombing of North Vietnam as a prelude to peaceful negotiations, his efforts were useless.

Middle East Crisis. The secretary-general was publicly criticized for withdrawing the UN Emergency Force from the Egyptian-Israeli border on May 19. However, the force was stationed on the Arab side of the border only with the permission of the United Arab Republic, and was withdrawn at its request. Israel would not allow UN troops on its side of the frontier. Also, according to reports, India and Yugoslavia (pro-UAR in sentiment) had informed U Thant that they were pulling their troops out of the UN force.

U Thant flew to Cairo on May 22 to try to prevent the outbreak of war, but failed. Only after the actual fighting began on June 5 was he able to act effectively. Throughout the summer and fall U Thant asked the UAR and Israel to use the UN Truce Supervision Organization (UNTSO), and, based on the recommendations of Lt. Gen. Odd Bull of Norway, chief of staff of UNTSO, he proposed strengthening that organization to prevent violations of the cease-fire. In November he appointed a personal representative, Gunnar Jarring of Sweden, to pursue peaceful settlement of Middle East problems.

Cyprus. U Thant's efforts in 1967 resulted in 3-month renewals of the UN force in Cyprus. When violence erupted in November, he appealed to Cyprus, Greece, and Turkey, and dispatched a personal representative. He also was instrumental in arranging for a withdrawal of Greek and Turkish forces from Cyprus, but by the end of the year the situation was far from stable.

Background. U Thant was educated at University College, Rangoon. He taught English and modern history, and later was headmaster of the National School at Pantanaw. When the British granted independence to Burma in 1948, U Thant became a principal advisor to U Nu, Burma's first prime minister. In 1957 he was appointed the nation's first permanent representative to the United Nations. He was elected acting secretary-general on Nov. 3, 1961, was confirmed in the post on Nov. 30, 1962, and was reelected on Dec. 2, 1966.

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UPI

U THANT faced a year of crises in 1967. He is shown here on May 30 at a UN Security Council debate on the Middle East, one of the year's chief threats to world peace.

THEATER

JOHN WOOD AND BRIAN MURRAY (*right*) alternated in the title roles of *Rosencrantz and Guildenstern Are Dead,* English play by Tom Stoppard.

FRIEDMAN-ABELES

THEATER

The 1967 theatrical scene in the United States can be summed up in terms of Wall Street as follows: Broadway was down, way down; Off-Broadway was definitely up, and in the rest of the nation things were spotty, reflecting elements of both weakness and strength.

Theater Outside New York Some of the most encouraging theatrical developments of the 1966–67 season took place on the West Coast. At the Music Center in Los Angeles two new theaters were opened—the good-sized Ahmanson and the smaller Mark Taper Forum, the latter starting off well with its own company. During the summer, Shakespeare thrived as never before from San Diego to Seattle. Best of all, perhaps, the American Conservatory Theater found a permanent home in San Francisco and won backing that apparently assures it freedom from financial problems for several years. In an auspicious launching, it put on a *Tartuffe* that the San Francisco *Chronicle* said "may well be remembered as the single most important event in this city's theatrical history."

In Milwaukee, Tyrone Guthrie staged an exciting *The House of Atreus,* a rewrite of the classic, with his actors—equipped with masks, stilts, and elevator boots—looming like giants. And at the Yale School of Drama, the poet Robert Lowell's new version of *Prometheus Bound* starred Kenneth Haigh and Irene Worth in an impressive performance.

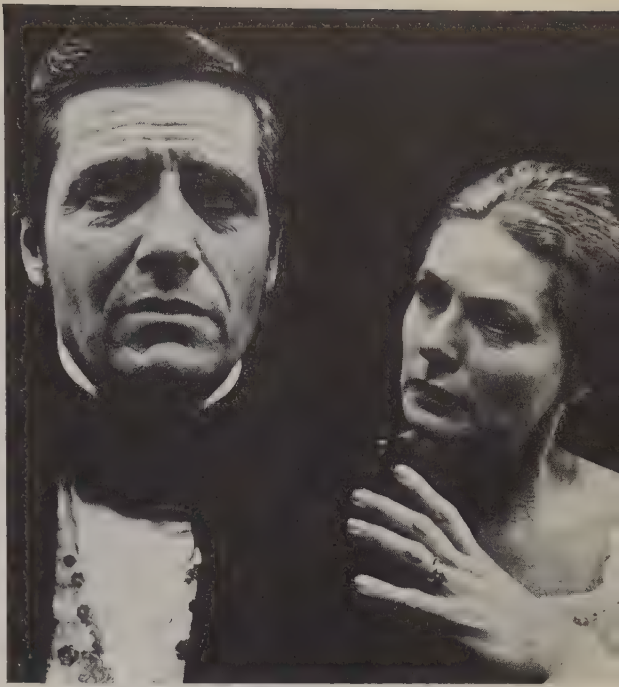
Elsewhere, it was a year of crisis for quite a few resident companies. In Pittsburgh, Philadelphia, New Haven, and other places, the artistic director, after clashes with the governing board, resigned. Generally it was a case of adventurous youth versus conservative middle age, of a director favoring works that the board found beyond the audience's understanding or in poor taste. When Philadelphia's Theater of the Living Arts staged a surrealistic play, two of the board's trustees protested that such plays would attract only "junkies, delinquents, potential suicides, and some college kids."

Broadway Plays. Halfway through 1967 it appeared that the Broadway season would be one of the worst ever, not only because the number of new plays was down (there were fewer openings than in any other season in this century), but also because their quality was low. The only new play of real distinction was Harold Pinter's *The Homecoming,* although there were also some worthy revivals—*Marat/Sade* at a Broadway house, *Galileo* at Lincoln

FRIEDMAN-ABELES

ROBERT PRESTON won a Tony award as best musical star and actor of the 1966–67 Broadway season for his performance as costar with Mary Martin in Tom Jones' musical *I Do! I Do!,* adapted from Jan de Hartog's play *The Fourposter.* In 1958, Preston had won the same award for his starring performance in *The Music Man,* which he repeated in the 1962 motion picture version.

He was born Robert Meservey, in Newton Highlands, Mass., on June 8, 1918. He made his stage debut in Los Angeles in 1932, and he later received dramatic training at the Pasadena Playhouse College of Theater Arts. During World War II he served as a captain in the U. S. Army Air Force. Since making his film debut in *King of Alcatraz* (1938), he has appeared in scores of motion pictures, including *Beau Geste* (1940), *Wake Island* (1941), *The Macomber Affair* (1947), *The Dark at the Top of the Stairs* (1960), and *How the West Was Won* (1963). Broadway productions in which he has appeared include *Twentieth Century* (1951), *The Male Animal* (1952), *The Tender Trap* (1954), and *Ben Franklin in Paris* (1964).



INGRID BERGMAN returned to Broadway opposite Arthur Hill in *More Stately Mansions,* the last and, in the view of critics, least of Eugene O'Neill's autobiographical plays.

Center, and the fine productions of the APA-Phoenix repertory company. By the end of the year, however, the season had rallied slightly, thanks chiefly to English writers, namely Pinter (*The Homecoming* and *The Birthday Party*), Tom Stoppard (*Rosencrantz and Guildenstern Are Dead*), and John Bowen (*After The Rain*).

Again proving his mastery of a laconic yet telling idiom, Pinter's two dramas were enigmatic, thought-provoking, and loaded with menace. *Homecoming* dealt less with real people than with embodiments of dark passions in human nature. The monstrous family in the play includes a lecherous old father whose sons are an unscrupulous pimp, an animalistic boxer, and a professor who is all detached intellect and not the least upset when the others propose sleeping with his wife and exploiting her as a prostitute. Expertly directed by Peter Hall, the whole cast, headed by Paul Rogers and Vivien Merchant, was superb. As for *Birthday Party,* although written in 1958 before Pinter's style had fully matured, it too was a witches' brew of tension and grotesque humor. The story of a man hiding out in a seedy boarding house and of two visitors bent on taking him with them, it was generally well acted, especially by Ruth White and James Patterson.

In *Rosencrantz and Guildenstern,* Stoppard raises two peripheral characters in *Hamlet* to protagonists, and uses Shakespeare's play as background. Underlying the comedy is a serious concern with little men who are caught up in affairs of great moment, used carelessly, then tossed aside. Ultimately, Stoppard's play is concerned with the basic issues of how a man regards himself and his lot in life, and how he faces the prospect of death. A sizable achievement—witty, stimulating, boldly and beautifully theatrical—the play was further enhanced, under Derek Goldby's direction, by the impeccable acting of Brian Murray, John Wood, and Paul Hecht.

Imaginative and irreverent, John Bowen's *After The Rain* is set in the 22d century, long after a global flood has wiped out all but a few people. Instead of telling a neat story, it is a play within a lecture. Through a periodic lecture, the audience is given tantalizing glimpses of the society that has evolved by 2169, from the few survivors of the great rain of 1969. Alec McCowen was excellent.

Other English works worth noting included two by Peter Ustinov. *The Unknown Soldier and His Wife,* diverting but uneven, skipped lightly over the centuries as it jabbed at the warmakers who are always with us. *Halfway Up the Tree,* his other work, dealt with the generation gap—a theme that preoccupied half of the year's comedy writers. In Ustinov's moderately entertaining version, an army general returns home after a long absence to find that his children are hippies. The year's funniest play, *Black Comedy,* was by versatile Peter Shaffer, who previously wrote *The Royal Hunt of The Sun* and *Five Finger Exercise.* Terence Frisby's *There's a Girl in My Soup,* though less clever, proved to have the elements of popular success.

Since Eugene O'Neill is America's foremost playwright, his *More Stately Mansions* was automatically a theatrical event. Part of an unfinished 9-play cycle, *Mansions* itself was left in preliminary form at O'Neill's death. It cannot be judged as a finished play. But seen as a work-in-progress that has been cut by other hands, it gives an indication of O'Neill's intent in his most ambitious effort. Set in the last century, *Mansions* is about a young industrialist at war with himself; his mother, a neurotic soul at odds with reality; and his vital Irish wife. Ingrid Bergman, though miscast as the mother, played with great charm. Colleen Dewhurst was fine as the wife, and Arthur Hill had the thankless, unresolved role of the son and husband.

BARBARA HARRIS won a Tony award as the best musical star and actress of the 1966–67 Broadway season for her performance in *The Apple Tree,* a series of three musical plays by Jerry Bock and Sheldon Harnick, based on stories by Mark Twain, Frank R. Stockton, and Jules Feiffer. In 1962 she received a Theatre World award and a Village Voice Obie award for her off-Broadway performance as Rosalie in *Oh Dad, Poor Dad, Mamma's Hung You in the Closet and I'm Feeling So Sad.*

Miss Harris was born in Evanston, Ill., in 1935. She attended high school in Chicago, studied improvisational theater with Paul Sills, and made her stage debut in 1959 at the Playwrights Theater Club in Chicago. In 1960–61 she appeared in satirical revues with the Second City Company in Chicago, and in 1961–62 she was a member of the cast of that company's New York production *From the Second City.* She also appeared in the Broadway productions of Brecht's *Mother Courage and Her Children* (1963) and the musical *On a Clear Day You Can See Forever* (1965).

FRIEDMAN-ABELES

BROADWAY OPENINGS IN 1967

PLAYS

After The Rain, by John Bowen; directed by Vivian Matalon; with Alec McCowen and Paul Sparer; October 9–December 2.

The Astrakhan Coat, by Pauline Macaulay; directed by Donald McWhinnie; with Roddy McDowall; January 12–28.

The Birthday Party, by Harold Pinter; directed by Alan Schneider; with Ruth White and Ed Flanders, October 3–.

Black Comedy and White Lies, by Peter Shaffer; directed by John Dexter; with Geraldine Page and Michael Crawford; February 12–December 2.

Brief Lives, adapted and directed by Patrick Garland from John Aubrey's *Lives;* with Roy Dotrice; December 18–December 30.

By George, devised by Michael Voysey from Bernard Shaw's writings; with Max Adrian; October 12–22.

Come Live With Me, by Lee Minoff and Stanley Price; directed by Joshua Shelley; with Soupy Sales; January 26–28.

Daphne in Cottage D, by Stephen Levi; directed by Martin Fried; with Sandy Dennis and William Daniels; October 15–November 18.

Dr. Cook's Garden, by Ira Levin, who also directed; with Burl Ives; September 25–30.

Everything in the Garden, Edward Albee's adaptation of a play by Giles Cooper; directed by Peter Glenville; with Barbara Bel Geddes and Barry Nelson; November 29–.

The Girl in the Freudian Slip, by William F. Brown; directed by Marc Daniels; with Alan Young and Marjorie Lord; May 18–20.

Halfway Up the Tree, by Peter Ustinov, who also directed; with Anthony Quayle and Eileen Herlie; November 7–December 31.

The Homecoming, by Harold Pinter; directed by Peter Hall; with Paul Rogers, Vivien Merchant and Ian Holm; January 5–October 14.

How To Be a Jewish Mother, adapted by Seymour Vall from Dan Greenberg's novel; directed by Frederick Rolf; with Molly Picon and Godfrey Cambridge; December 28–.

Johnny No-Trump, by Mary Mercier; directed by Joseph Hardy; with Pat Hingle and Sada Thompson; October 8 (1 performance).

Keep It in the Family, by Bill Naughton; directed by Allan Davis; with Patrick Magee and Maureen O'Sullivan; September 27–30.

The Little Foxes, by Lillian Hellman (revival); directed by Mike Nichols; with Anne Bancroft, George C. Scott, and Margaret Leighton; October 26–.

Little Murders, by Jules Feiffer; directed by George L. Sherman; with Elliott Gould and Barbara Cook; April 25–29.

Love in E-Flat, by Norman Krasna; directed by George Seaton; with Hal Buckley and Kathleen Nolan; February 13–March 4.

A Minor Adjustment, by Eric Nikol; directed by Henry Kaplan; with William Redfield and Austin Willis; October 6–7.

More Stately Mansions, by Eugene O'Neill; directed by José Quintero; with Ingrid Bergman, Colleen Dewhurst, and Arthur Hill; October 31–.

The Natural Look, by Lee Thuna; directed by Martin Fried; with Gene Hackman; March 9 (1 performance).

The Ninety-Day Mistress, by J. J. Coyle; directed by Philip Rose; with Dyan Cannon; November 6–25.

Of Love Remembered, by Arnold Sundgaard, directed by Burgess Meredith; with Ingrid Thulin; February 18–25.

The Paisley Convertible, by Harry Cauley; directed by James Hammerstein; with Marsha Hunt and Bill Bixby; February 11–18.

The Persecution and Assassination of Jean-Paul Marat as Performed by the Inmates of the Asylum of Charenton Under the Direction of the Marquis de Sade, by Peter Weiss (revival); directed by Donald Drive; with William Roerick and Dennis Patrick; January 3–February 18.

The Promise, translated by Ariadne Nicolaeff from the Russian of Aleksi Arbuzov; directed by Frank Hauser; with Eileen Atkins, Ian McShane, and Ian McKellen, November 14–December 2.

Rosencrantz and Guildenstern Are Dead, by Tom Stoppard; directed by Derek Goldby; with Brian Murray, John Wood, and Paul Hecht; October 16–.

Something Different, by Carl Reiner, who also directed; with Bob Dishy and Gabriel Dell; November 28–.

Song of the Grasshopper, adapted by William Layton and Agustin Penon from the Spanish of Alfonso Paso; directed by Charles Bowden; with Alfred Drake; September 28–30.

Spofford, adapted by Herman Shumlin, who also directed, from Peter DeVries' novel *Reuben, Reuben;* with Melvyn Douglas; December 14–.

That Summer—That Fall, by Frank D. Gilroy; directed by Ulu Grosbard; with Irene Papas and Jon Voight; March 17–25.

There's a Girl in My Soup, by Terence Frisby; directed by Robert Cheywyn; with Gig Young and Barbara Ferris; November 18–.

The Trial of Lee Harvey Oswald, by Amram Ducovny and Leon Friedman; directed by Tunc Yalman; with Peter Masterson; November 5–11.

The Unknown Soldier and His Wife, by Peter Ustinov; directed by John Dexter; with Howard DaSilva, Christopher Walken, and Bob Dishy; July 6–November 12.

A Warm Body, by Lonnie Coleman; directed by Porter Van Zandt; with Kevin McCarthy and Lois Markle; April 16 (1 performance).

What Did We Do Wrong?, by Henry Denker; directed by Sherwood Arthur; with Paul Ford; October 22–December 2.

You Know I Can't Hear You When the Water's Running, by Robert Anderson; directed by Alan Schneider; with Martin Balsam, Eileen Heckart, Melinda Dillon, and George Grizzard; March 13–.

MUSICALS

Hallelujah, Baby!, book by Arthur Laurents, music by Jule Styne, lyrics by Betty Comden and Adolph Green; directed by Burt Shevelove; with Leslie Uggams, Allen Case, and Billy Dee Williams; April 26–.

Hello, Solly!, American Yiddish revue, with Mickey Katz and Larry Best; April 5–May 28.

Henry, Sweet Henry, book by Nunnally Johnson, from Nora Johnson's novel *The World of Henry Orient;* music and lyrics by Bob Merrill; directed by George Roy Hill; with Don Ameche; October 23–December 31.

How Now, Dow Jones, book by Max Shulman, music by Elmer Bernstein, lyrics by Carolyn Leigh; directed by George Abbott; with Anthony Roberts and Brenda Vaccaro; December 7–.

Ilya, Darling, book by Jules Dassin, who also directed, from the movie *Never on Sunday;* music by Manos Hadjidakis; lyrics by Joe Darion; with Melina Mercouri and Orson Bean; April 11–.

Sherry!, book and lyrics by James Lipton; music by Laurence Rosenthal; directed by Joe Layton; with Clive Revill and Dolores Gray; March 28–May 27.

Sing, Israel, Sing, based on Jewish folklore; directed by Mina Bern, who also costarred with Ben Bonus; May 11–June 11.

A major disappointment of the Broadway season was Edward Albee's *Everything in the Garden,* based on a play by the English writer Giles Cooper. An indictment of people who value money and social status too highly, it told of some suburban couples so venal that the husbands easily accept that their wives, preserving a façade of respectability, have become highly paid prostitutes. Unfortunately, this attempt at a modern *Volpone* was an uneasy mixture of realistic and suprarealistic elements that never jelled, in spite of having such able players as Barbara Bel Geddes and Barry Nelson.

Fourteen years after *Tea and Sympathy,* Robert Anderson finally scored another solid hit with *You Know I Can't Hear You When the Water's Running,* a shrewd, showmanly package of playlets dealing with that always popular subject—sex. Although scarcely memorable, the bill was engaging, warmly humorous fare, due largely to Alan Schneider's direction and the expert acting of Martin Balsam, Eileen Heckart, and George Grizzard.

Other new works that were above average were *Spofford,* adapted by Herman Shumlin from a Peter DeVries novel, and *The Promise,* from the Russian of Aleksi Arbuzov. *Spofford,* a humorous tale of conflict between country people and city sophisticates, gained considerably from Melvyn Douglas' playing as a self-educated farmer. *Promise,* well

FRIEDMAN-ABELES

MELINA MERCOURI, the Greek film actress, spent most of 1967 on Broadway, following her debut in *Ilya, Darling*.

FRIEDMAN-ABELES

HELLO, DOLLY! got a new lease on life when Lucia Victor restaged the musical for Pearl Bailey and Cab Calloway.

acted by Eileen Atkins, Ian McShane, and Ian McKellen, told of two men in love with the same girl.

In one of the fall's highlights, a guest production for Lincoln Center's repertory season, Mike Nichols staged a brilliant revival of Lillian Hellman's *The Little Foxes*. Its stellar cast was headed by Anne Bancroft, Margaret Leighton, and George C. Scott.

Broadway Musicals. The year's musicals were more or less routine, but two talented ladies made Broadway debuts. Leslie Uggams in *Hallelujah, Baby!* and Melina Mercouri in *Ilya, Darling* turned their shows into hits. A beauty who sings well, dances well, and plays with infectious joy, Miss Uggams made the most of her opportunities as a Negro girl trying to get ahead in show business. In *Ilya,* based on the film *Never on Sunday,* Miss Mercouri, a vital blonde charmer, again played a heart-of-gold prostitute entangled with an American in Greece.

David Merrick, normally a producer with a Midas touch, had a lean year. Both of his new Broadway musicals, *Henry, Sweet Henry* and *How Now, Dow Jones,* were lackluster, and his third one, *Mata Hari,* folded out of town with an $800,000 loss. His main consolation was that his long-run *Hello, Dolly!* zoomed again to sell-out status as irresistible Pearl Bailey, heading an all-Negro cast, became the new Dolly. Finally, in one-woman shows of song, ever-fascinating Marlene Dietrich played to packed houses and Judy Garland took over the Palace.

Repertory. The fortunes of the Lincoln Center Repertory Company improved after a faltering start. In January, Herbert Blau resigned, leaving Jules Irving as sole artistic director. But the mediocrity that had marked their regime continued in the year's first production, Leo Lehman's *The East Wind.* The upturn came with a crisp revival of Brecht's *Galileo,* starring Anthony Quayle under John Hirsch's alert direction, and the theater hit its peak in the exciting *Little Foxes.* However, a bill of Mayo Simon's *Walking to Waldheim* and *Happiness* was only minor fare.

The news about the APA-Phoenix, headed by Ellis Rabb, was altogether good. In the early part of 1967 it staged a worthy *The Wild Duck,* a lively *You Can't Take It With You,* and above all a brilliantly theatrical *War and Peace.* In the fall it returned with de Ghelderode's *Pantagleize,* another triumph of theatricality, and a splendid revival of George Kelley's *The Show-Off.* The Phoenix was not only in fine shape artistically but, thanks to grants from several foundations, in good economic health.

In its first visit to the United States, the Jewish State Theater of Poland starred Ida Kaminska, who won acclaim in the 1966 film *The Shop on Main Street.* She appeared in her own adaptations of Jacob Gordin's *Mirele Efros* and Brecht's *Mother Courage.* Another welcome visitor was the Bristol Old Vic, with workmanlike performances of *Hamlet, Romeo and Juliet,* and *Measure for Measure.* The National Repertory Company made a poor showing, however, in Molière's *The Imaginary Invalid,* O'Neill's *Touch of the Poet,* and Noel Coward's *Tonight at 8:30.*

VAN WILLIAMS

FRIEDMAN-ABELES

THE HOMECOMING, Pinter's travesty of a family reunion, featured Paul Rogers (*kneeling*) in London and New York.

THE APA COMPANY lured Helen Hayes from Broadway to repertory. Clayton Corzatte gives advice in *The Show-Off.*

Off-Broadway. Off-Broadway had one of its finest years. The best dramas were *The Rimers of Eldritch* by Lanford Wilson and *The Strong Breed* by Wole Soyinka of Nigeria. The best comedy was *Scuba Duba* by Bruce Jay Friedman, with Jerry Orbach performing brilliantly. And the best off-Broadway musicals were *You're a Good Man, Charlie Brown,* a little gem of charm, humor, and melody that could run for years, and *In Circles,* a graceful take-off from a Gertrude Stein work. The most controversial play was *MacBird!,* Barbara Garson's barbed going-over of national figures, particularly President Lyndon B. Johnson.

The year also saw Joseph Papp's New York Shakespeare Festival launched in its permanent year-round home with *Hair,* a "love-rock musical" that made up in freshness and exuberance what it lacked in form. Other new works of interest were Norman Mailer's *The Deer Park,* Emanuel Fried's *The Dodo Bird,* Murray Schisgal's *Fragments,* Michael McClure's *The Beard,* Hugh Leonard's *Stephen D,* Sam Shepard's *La Turista,* John Herbert's *Fortune and Men's Eyes,* John Wilson's *Hamp,* Ronald Tavel's *Gorilla Queen,* the musical *Now Is the Time for All Good Men,* and Bill and Cora Baird's *People Is,* a puppet show.

Awards. The Pulitzer Prize committee chose Edward Albee's *A Delicate Balance* as the best American play of the 1966–67 season (the theater season runs from July 1 of one year to the next). However, both the New York Drama Critics' Circle and the American Theater Wing, which both consider imports as well as American works, called Pinter's *The Homecoming* the best play and *Cabaret* the best musical.

The Theater Wing's chief Tony awards in the straight play category went to Beryl Reid, best female star (*The Killing of Sister George*); Paul Rogers, best male star (*The Homecoming*), and Peter Hall, best director (*The Homecoming*). In the musical category, Tony awards went to Barbara Harris, best female star (*The Apple Tree*); Robert Preston, best male star (*I Do! I Do!*); and Harold Prince, best director (*Cabaret*).

International. The theatrical event of Canada's Expo 67 was the visit of Britain's National Theatre, headed by Sir Laurence Olivier, in Strindberg's *The Dance of Death,* Congreve's *Love for Love,* and Feydeau's *A Flea in Her Ear.* In Ontario the Stratford Festival Theater did well by *Richard III, Antony and Cleopatra, The Merry Wives of Windsor,* and *The Inspector General.*

The most talked-about works of the English theater season were *Mrs. Wilson's Diary,* staged by Joan Littlewood, which poked fun at the country's top political figures; *Wise Child,* with Alec Guinness masquerading as a woman, and an original *As You Like It,* with mod sets and an all-male cast. In Ireland, Brian Friel scored a hit with *Lovers.*

LOUIS SHEAFFER
Author of "O'Neill, Son and Playwright"

THIEU, Nguyen Van. See biographical sketch under VIETNAM.

TITO (Josip Broz). See biographical sketch under YUGOSLAVIA.

TOBACCO

World production of tobacco totaled 10,175,075,000 pounds in 1967, up 6% from a year earlier, and almost equal to the record crop of 1964. Asia and North America accounted for most of the increase. Production did, however, increase in all continents except Africa.

Higher yields accounted for an increase in United States production. A near-record crop in Canada and the increase in the United States helped push North American production up from 2,406,391,000 pounds in 1966 to 2,515,750,000 pounds in 1967. Large production increases in Argentina and Paraguay led to an increase in South American production from 555,793,000 pounds in 1966 to 586,516,000 pounds in 1967.

TOBACCO PRODUCTION IN MAJOR COUNTRIES
(In pounds)

Country	Average, 1960–64	Preliminary, 1966	Preliminary, 1967
Argentina	106,262,000	98,546,000	130,071,000
Brazil	336,211,000	298,748,000	279,719,000
Bulgaria	211,393,000	273,370,000	265,142,000
Canada	196,295,000	233,976,000	231,300,000
Greece	218,741,000	216,101,000	251,375,000
India	736,399,000	656,309,000	771,610,000
Indonesia	159,569,000	194,000,000	209,437,000
Italy	125,595,000	161,169,000	160,935,000
Japan	333,382,000	435,347,000	449,428,000
Korea, South	76,291,000	158,590,000	143,299,000
Pakistan	212,912,000	302,848,000	392,004,000
Philippines	152,708,000	128,135,000	110,200,000
Poland	127,783,000	105,821,000	126,850,000
Rhodesia	226,233,000	249,341,000	197,500,000
Turkey	278,771,000	367,053,000	364,861,000
United States	2,178,400,000	1,890,320,000	2,018,569,000
USSR	368,206,000	518,081,000	...
Yugoslavia	88,261,000	119,269,000	132,276,000
World total	8,908,696,000	9,611,988,000	10,175,075,000

Increased plantings contributed to a larger crop in western Europe. Production in eastern Europe also rose. Total European production increased from 1,247,975,000 pounds in 1966 to 1,338,695,000 pounds in 1967.

Larger crops in a number of nations led to an increase in Asian production from 4,338,119,000 pounds in 1966 to 4,683,814,000 pounds in 1967. Production also increased in Oceania.

United States exports of unmanufactured tobacco in 1967 totaled 585,000,000 pounds, export weight (about 660,000,000 pounds, farm-sales weight), an increase of 6% over 1966, and the largest since 1946.

A record 580,000,000,000 cigarettes were produced in the United States in 1967, an increase of 2% from a year earlier and 4% more than in 1965. Per capita consumption of cigarettes increased slightly over 1966, and was second only to the 1963 record.

Consumption of cigars and cigarillos in the United States in 1967 totaled around 8,100,000,000, over 2% less than in 1966 and 6% less than in 1965.

Nicholas Kominus
Kominus Agri-Info Associates

TOBAGO. See Trinidad and Tobago.

TOGO

Politics in Togo during 1967 oscillated between covert and overt military rule. On January 13, Army Chief of Staff Col. Étienne Eyadema intervened to prevent "imminent civil war" and deposed President Nicolas Grunitzky. Eyadema set up an advisory civilian National Reconciliation Committee and promised national elections. However, pressure soon mounted from southerners (especially Ewe supporters of former President Sylvanus Olympio, who was assassinated in 1963), and in April, Eyadema took over as president, dissolving the NRC and banning all political parties.

In July, President Eyadema announced that the army would withdraw when the situation returned to "normal." In October a constitutional committee was established, which included several cabinet members of ex-Presidents Grunitzky and Olympio. Eyadema promised to hand over power to civilians "as soon as peace and reconciliation are firmly established."

The uncertain political situation was also marked by the arrests of Maj. Emmanuel Bodjolle (army chief of staff and leader of the 1963 military coup) and Lucas Afantchavao (secretary-general of a student group critical of army rule), and by amnesties granted 32 persons imprisoned for treason.

TOGO • Information Highlights

ASIA
AFRICA

Area: 21,853 square miles (56,600 sq km).
Population: 1,680,000 (mid-1966 est.).
Chief City (1966 est.): Lomé, the capital, 86,400.
Government: *President*—Lt. Col. Étienne Eyadema (assumed office April 14, 1967).
Religious Faiths: Tribal religions, 70% of population; Roman Catholics, 17%; Muslims, 5%; others, 8%.
Education: *Total school enrollment* (1965)—169,038 (primary, 155,880; secondary, 11,381; teacher-training, 66; technical, 1,681; higher, 30).
Finance (1966): *Revenues,* $25,435,000; *expenditures,* $20,109,000; *monetary unit,* CFA franc (246.85 francs equal U. S.$1).
Gross National Product (1966): $144,000,000.
National Income (1965): $135,000,000; average annual income per person, $82.
Manufacturing (metric tons, 1965): Palm oil, 2,800.
Crops (metric tons, 1965–66 crop year): Cassava, 982,000; sweet potatoes and yams, 902,000; millet and sorghum, 144,000; peanuts, 21,000; palm kernels (1966–67), 18,500; cocoa beans, 14,800; coffee, 13,500.
Chief Mineral (metric tons, 1965): Phosphate rock, 973,000.
Foreign Trade (1966): *Exports,* $36,000,000 (chief exports: phosphates, $15,000,000; coffee, $7,900,000; cacao, $6,850,000; palm nuts, $2,210,000); *imports,* $47,400,000 (chief imports, 1965: nonelectrical machinery, $8,205,000; woven cotton fabrics, $7,290,000; motor vehicles, $2,788,000). *Chief trading partners* (1965): France (took 44% of exports, supplied 31% of imports); West Germany (took 9% of exports, supplied 19% of imports); Japan (took 4% of exports, supplied 14% of imports).
Transportation: *Roads* (1965), 2,933 miles (4,720 km); *motor vehicles* (1965), 6,249 (automobiles, 3,490); *railways* (1965), 274 miles (441 km); *civil airline,* Air Afrique; *principal airport,* Lomé.
Communications: *Telephones* (1967 est.): 3,200; *radios* (1965), 30,000; *newspapers* (1964), 1 (daily circulation, 10,000).

President Eyadema reportedly opposed a single-party system. He asserted that the future constitution would permit two parties—an implicit criticism of the four-party division that previously characterized Togolese politics.

Foreign Relations. Relations with Ghana continued to improve. Agreement was reached on sharing power from the Volta River Dam in Ghana. Togo participated in the Council of the Entente, which met twice in 1967 in the Ivory Coast.

Economic Development. Construction continued on the artificial harbor at Lomé. The European Economic Community and West Germany were asked for aid to complete the project. In April an Economic and Social Council was established to supervise progress on the 5-year plan, inaugurated in 1966. To rectify Togo's serious economic difficulties, a 33% slash in civil service salaries was announced by President Eyadema.

Claude E. Welch, Jr.
State University of New York at Buffalo

TORONTO

Toronto, the capital of Ontario and Canada's second largest city (est. 1967 pop.: city, 694,000; metropolitan area, 1,875,000), began 1967 with a revised system of metropolitan government. The year also brought the beginning of railway transportation for commuters and cancellation of a downtown development project.

Government. Effective Jan. 1, 1967, the number of municipalities making up the administrative unit known as Metropolitan Toronto was reduced from 13 to 6, and a more powerful Metropolitan Council was established. The remaining 6 local governments are the city proper (with a new mayor, William Dennison, who assumed office on January 1), and East York, Etobicoke, North York, Scarborough, and York. Each has a council directly elected by residents of the municipality.

The Metropolitan Council consists of 32 local councillors (12 from Toronto and 20 from the other municipalities) and a chairman (William R. Allan, since 1962) whom it elects from outside its membership. The executive body consists of the six mayors, four Toronto controllers, and the chairman.

The Metropolitan Council is responsible for issuing debentures, determining finance policies, and providing police protection and waste disposal. All the municipalities, as well as Metropolitan Toronto, have library and education boards. There have been some complaints about the new system, particularly demands for total amalgamation and the election of the metropolitan chairman by popular vote.

Development Project. In May, after a year's negotiations, the T. Eaton Co., one of Toronto's largest department stores, dropped its $250 million downtown development plan on the grounds that it would be insufficiently profitable.

Education and Culture. In June, 1,200 high school teachers resigned over a salary dispute that was settled when they received an increase in the fall. The provincial government announced plans for a $42 million library for the University of Toronto, which will serve as the university research library for the province. In September, the university opened Erindale College in the west end of the city.

As part of a Centennial project, the city restored the historic St. Lawrence Market (dating from 1850), but no agreement was reached on plans for the new St. Lawrence Centre for the Arts.

Housing and Transportation. The Ontario government started its new HOME (Home Ownership Made Easy) plan to relieve the housing shortage for moderate-income families. Under the plan, fully serviced lots are provided for lease or sale to persons who wish to build upon them. Several thousand such lots are to be available in suburban Bramalea.

In May, provincially sponsored trains began to run along Lake Ontario from Hamilton to Pickering, making 50 runs a day at speeds up to 80 miles per hour. The publicly owned Toronto Transportation Commission was relieved of its municipal taxes to aid in the $79 million Yonge Street subway extension.

Frederick H. Armstrong
University of Western Ontario

TRADE. See Federal Trade Commission; International Trade.

TRAFFIC SAFETY. See National Highway Safety Bureau.

TRACY, Spencer

U. S. film star: b. Milwaukee, Wis., April 5, 1900; d. Beverly Hills, Calif., June 10, 1967.

Few movie stars enjoyed such wide popularity for so many years as did craggy-faced Spencer Tracy. Twice winner of the Academy Award for best actor of the year, Tracy had the esteem of the critics, of the public, and—an almost unique distinction—of his fellow actors. Besides being a "natural" actor whose performances appeared effortless, Tracy's looks and personality represented one of the most admired American types—the man of action, brave yet unassuming, with a zeal for justice. His long-time friend and frequent co-star, Katharine Hepburn, once said "He's like an old oak tree .... He has enormous integrity."

Career. Spencer Tracy was a pre-medical student at Ripon College in Ripon, Wis., when one day "the drama coach watched me debating, and spotted the ham in me." He was given a part in a college play and soon decided to become an actor. Tracy left college and enrolled at the American Academy of Dramatic Arts in New York City. He made his Broadway debut in a bit part in Karel Čapek's *R. U. R.* Lean years followed, spent largely on the road and in stock companies, with some minor Broadway roles. In 1923 he married the actress Louise Treadwell.

The results of a screen test made by Tracy in 1930 seemed discouraging. Mrs. Tracy wrote to her sister, "Spencer doesn't photograph very well, so we're forgetting about the talkies." But later the same year, Fox Studios signed him for his first film, *Up the River*. Tracy went on to make more than 60 films in his career, most of them during 20 years under contract to Metro-Goldwyn-Mayer.

In 1941, Tracy first co-starred with Katharine Hepburn in *Woman of the Year*. Thereafter they were teamed in eight more films, including *State of the Union, Adam's Rib, Pat and Mike,* and *Guess Who's Coming to Dinner?* (released after his death).

Awards. The Academy Award for best actor was twice given to Tracy—in 1937 for his portrayal of the Portuguese fisherman in *Captains Courageous*, and in 1938 for his role in Father Flanagan in *Boys' Town*. In addition, he was nominated for the "Oscar" for his roles in *San Francisco, Father of the Bride, Inherit the Wind, The Old Man and the Sea, Bad Day at Black Rock,* and *Judgment at Nuremberg*.

Louis Sheaffer
Author of "O'Neill, Son and Playwright"

PICTORIAL PARADE

SPENCER TRACY, shown in the film *The Old Man and the Sea*, died at his Beverly Hills home on June 10, 1967.

TRANSPORTATION

THE NEW YORK TIMES

THE LONG ISLAND EXPRESSWAY in New York, viewed from a helicopter during the evening rush hour, typifies the growing congestion around United States urban centers.

TRANSPORTATION

The dependency of the United States on transportation has been a constant reminder during the past 100 years that the federal government needed to take definite measures to guide and reassure the growing giant of a transportation industry. An increasing realization of the need for government-industry cooperation led to the establishment, on April 1, 1967, of the U. S. Department of Transportation, the nation's 12th cabinet-level department.

The mobility provided by the wheel, which for the most part transformed the world from a foot economy to a mobile economy, has made transportation one of the United States' largest activities. Some 9 million people earn their living from transportation, and one in every five dollars flowing through the national economy can be traced to transportation.

The government has been much in the picture. For example, in 1965 more than $5 billion in federal funds was invested in transportation needs. This partnership type of investment represented mainly expansion of highway construction, river and harbor development, airway operation and airport construction, and shipbuilding and ship operation.

The country has a complex system of waterways, railways, highways, airways, and pipelines serving the demands of its people. In 1966 all commercial carriers in the United States moved more than 1½ trillion ton-miles (a ton-mile is one ton carried one mile) of freight, while its citizens traveled more than 940 billion intercity passenger-miles.

This mobility continually demands new and improved solutions to transportation problems. By 1980 the population of the United States should reach 250 million. By the year 2000 it should be 300 million. All of these people will be dependent daily on transportation of one form or another.

GROWTH OF TRANSPORTATION

A review of the transportation growth in the United States is a story of phenomenal results, revealing the need for a coordinated, comprehensive study of transportation problems that led to the decision to form the new Department of Transportation.

Motor Vehicles. Twenty years ago there were 31 million automobiles and trucks in the United States. Today there are 81 million automobiles alone, and the estimate for 1975 is for nearly 120 million vehicles.

Eighty percent of the nation's 60 million families own an automobile, and 12 million families have two or more. Each year, 7 million autos are scrapped, but the production rate is currently 2 million cars more than the scrappage rate.

Twenty years ago there were 1½ million miles of paved roads. There are now 2.8 million surfaced miles.

Thus, it is understandable that Americans travel more than any other people in the world. More than 967 billion vehicle-miles are driven annually by the automobile-owning public. This individual form of personal transportation alone accounts for the consumption of some 50 billion gallons of gasoline.

In addition to the automobiles, there are 16½ million trucks and buses on U. S. roads and highways.

Railroads. Nearly 344,000 miles of railroad track crisscross the United States. Over these rails were moved 1.4 billion tons of freight in 1966. The movement of freight is accomplished by nearly 2 million freight cars of various types (in addition to the 20,000 passenger cars), pulled by 28,000 diesel locomotives. This segment of transportation is run by 580 railroad companies operating on distances as short as a fraction of a mile up to several thousand miles.

Trains carrying goods and passengers average some 70 cars each. Such trains carry an average of 1,700 tons of freight.

Aircraft. Airplanes, to a greater and greater extent, provide fast movement between cities and nations. Here again is a story of rapid growth. Twenty years ago there were 38,000 private and commercial aircraft in the United States. By 1967 there were more than 100,000. Twenty years ago commercial airlines flew 209 million miles; in 1966 they flew more than 1½ billion miles.

Along routes approved by the Civil Aeronautics Board, nearly 2,400 planes are operated by 11 coast-to-coast trunk lines, 12 regional carriers, 10 charter operators, 3 all-cargo lines, and many small companies offering limited passenger and freight service with smaller planes. These lines together carried more than 100 million persons on domestic flights in 1966. Another 12 million flew to and from almost every nation in the world.

Barges. Another important form of transportation is the barge system. Rivers and canals stretching across 25,000 miles accommodate some 18,000 barges and 4,000 towboats.

Equipment and Technology. The manufacturing of transportation and related equipment has kept pace with and contributed to the remarkable growth of the system. In 1965, $4.5 billion was expended in the United States for new transportation plant and equipment.

Rapid strides in transportation technology have been made in recent years. Two prime examples are: (1) "piggybacking," whereby highway trailers make their journey by truck, then by rail, then by truck again; and (2) "containerization," making possible the speedy transfer of a fully loaded standardized metal container from truck to rail, to ship, to plane.

Transportation Inadequacies. Although the U. S. transportation system has grown and will continue to grow, President Johnson predicted that change was mandatory. He outlined some of the shortcomings in a message to Congress on March 2, 1966:

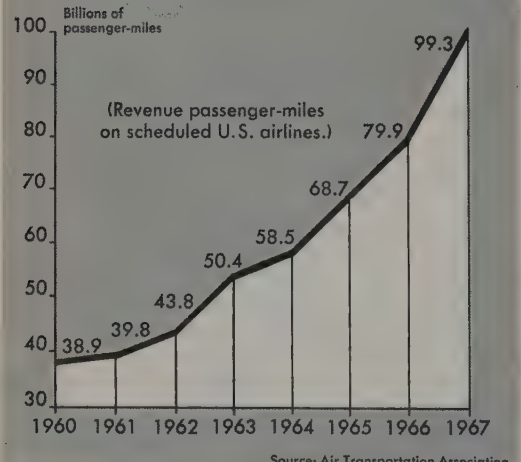
"Vital as it is, mammoth and complex as it has become, the American transportation system is not good enough. It is not good enough when it offers nearly a mile of street or road for every square mile of land—and yet provides no relief from time-consuming, frustrating, and wasteful congestion. It is not good enough when it produces a sleek and efficient jet aircraft—and yet cannot move passengers to and from airports in the time it takes those aircraft to fly hundreds of miles.

"It is not good enough when it builds superhighways for supercharged automobiles—and yet cannot find a way to prevent 50,000 highway deaths this year. It is not good enough when public and private investors pour $15 million into a large high-speed ship—only to watch it remain idle in port for days before it is loaded."

President Johnson has also expressed awareness of the problems of urban mass transit, which must be solved to prevent strangulation of many American cities.

These and other problems produced an acute consciousness that the transportation system was becoming too awkward and complex to be administered piecemeal by some 30 federal agencies and bureaus.

STEADY CLIMB IN U. S. AIR TRAVEL



Source: Air Transportation Association

ESTABLISHMENT OF THE DEPARTMENT

The necessity for combining these different transportation functions from an assortment of agencies into one department under a single roof was not a new idea, but rather one that had been developing for years.

Background. As the industry grew and the country expanded, there came the hint of a need for a transportation department within the government. In 1874, Ohio Congressman Laurin Woodworth submitted the idea to the House Committee on Railways. The press of other business and the problems of expanding the West absorbed the country at the time, and the idea, considered then as a major addition to government, failed to kindle any enthusiasm.

A select committee named by the Senate in 1936 during Franklin D. Roosevelt's administration recommended a department of transportation or an alternative to consolidate all transportation programs within the Department of Commerce, but the recommendation was not heeded by the Congress.

The Office of the Under Secretary of Commerce for Transportation was established in 1949 during the Truman administration. It initially served as a policy development office for the Maritime Administration, the Bureau of Public Roads, the Office of Emergency Transportation, and the Great Lakes Pilotage Administration. The decision to establish the Commerce post is generally conceded to have been an outgrowth of the 1949 recommendation for a department of transportation by the Hoover Commission Task Force on Transportation.

In 1961, President Eisenhower recommended the creation of a department of transportation. During his administration an actual department of transportation was suggested by a special Senate transportation study group as a promotion arm for the nation's burgeoning transport system.

In 1962, President Kennedy sent his transportation message to Congress, outlining fundamental reforms he felt were needed in the nation's transpor-

Official seal of U. S. Department of Transportation.

ALAN S. BOYD is sworn in as Secretary of Transportation. Shown (*from left*) are Judge James Durfee, Mr. and Mrs. Boyd, and the President.

WIDE WORLD

tation policy. He called for changes in intercity, urban, and international transportation, and labor relations and research. He concluded by saying:

"The troubles in our transportation system are deep; and no just and comprehensive set of goals—which meets all the needs of each mode of transportation as well as shippers, consumers, taxpayers and the general public—can be quickly or easily reached. The Congress and all citizens, as well as all Federal agencies, have an increasing interest in and an increasing responsibility to be aware of the shortcomings of existing transportation policies; and the proposals contained in this message are intended to be a constructive basis for the exercise of that responsibility. Facing up to the realities of the situation, we must begin to make the painful decisions necessary to providing the transportation system required by the United States of today and tomorrow."

Passage of the Act. President Johnson clearly defined the needs for a department of transportation when he presented his transportation message to Congress on March 2, 1966: "... We must secure for all our travelers and shippers the full advantages of modern science and technology. We must acquire the reliable information we need for intelligent decisions. We must clear away the institutional and political barriers which impede adaption and change. We must promote the efforts of private industry to give the American consumer more and better service for his transportation dollar. We must coordinate the executive functions of our transportation agencies in a single coherent instrument of government. Thus policy guidance and support for each means of transportation will strengthen the national economy as a whole .... I urge the creation of such a department to serve the growing demands of this great nation, to satisfy the needs of our expanding industry and to fullfill the right of our taxpayer to maximum efficiency and frugality in government operations .... In so doing, I follow the recommendation of many outstanding Americans."

Almost a year to the day after President Johnson's transportation message, the department became a functioning unit of government. The bill establishing the department won congressional approval on Oct. 13, 1968. The President signed the Department of Transportation Act on October 15, and the United States officially got its newest cabinet department on April 1, 1967.

FUNCTIONS OF THE DEPARTMENT

The primary roles of the Department of Transportation are safety and the promotion of the majority of the nation's transportation system (the sole exception being ocean shipping, promotion for which is handled by the Maritime Administration.

Office of the Secretary. The responsibilities of the secretary of transportation, as outlined by law, are many. "The Secretary of Transportation," the act reads, "will promote and undertake the development, collection and dissemination of technological, statistical, economic and other information relevant to domestic and international transportation. He shall promote and undertake research and development in and among all modes and types of transportation services and facilities, including noise abatement with particular attention to aircraft noise. He shall develop standards and criteria for the formulation and economic evaluation of all proposals for the investment of federal funds in transportation. This shall be done with certain exceptions including water resource projects. The secretary also is expected to coordinate all of the far-flung transportation activities of the Federal Government."

Structure of the Department. The Department of Transportation is composed of six major elements.

The National Transportation Safety Board implements the department's emphasis on safety. The five members of the board are appointed directly by the president and must be confirmed by the Senate. They are charged with investigating and determining the causes of aircraft, railway, highway, and oil pipe-line accidents and with drafting recommendations for promoting transportation safety.

The Federal Aviation Administration is responsible for aviation programs, including development of the civil supersonic plane. These responsibilities for air safety and efficiency begin at the drawing board and continue to the men who dispatch the aircraft, the pilots who fly them, the mechanics who maintain them, and the traffic control specialists who guide them in flight.

The Federal Highway Administration is responsible for the massive federal-aid highway construction program, the national traffic and motor vehicle safety campaign, and the national highway safety program. Within this administration is the Bureau of Public Roads, which administers all federal-aid highway programs, including the 41,000-mile (66,000-km) interstate system due for completion in the mid-1970's. (See also HIGHWAYS.)

The Federal Railroad Administration has responsibility for three basic programs—the Office of High-Speed Ground Transportation, railroad and oil pipeline safety regulation, and operation of the government-owned Alaska Railroad.

The Coast Guard enforces or helps enforce federal laws on the high seas or waters subject to U. S. jurisdiction. Its other duties include search and rescue services, icebreaking, maintaining ocean stations, and administering a merchant marine safety program. (In time of war the Coast Guard operates as an arm of the Navy.)

The St. Lawrence Seaway Development Corporation controls and operates the St. Lawrence Seaway in cooperation with the government of Canada.

Among the many other specific areas of Department of Transportation responsibility are administration of the Uniform Time Act, emergency transportation planning, noise abatement, highway beautification, and pollution control.

Allied Federal Agencies. As an example of the unique American system of industry-government cooperation and partnership in transportation, regulation of the commercial carriers is performed by the independent Interstate Commerce Commission, the Civil Aeronautics Board, the Federal Maritime Commission, and the Federal Power Commission. Their duties are to protect the public interest in the matter of fares, rates and operating routes, which the carriers themselves actually set.

The ICC deals with railroads, truckers, bus lines, barge lines, and coastwise and intercoastal shipping. The CAB and FMC, as their names indicate, deal with airlines and ocean ship lines. The FPC regulates the interstate aspects of the electric power and natural gas industries. And working with these federal agencies are regulatory commissions in each of the states.

THE OUTLOOK

Typical of the futuristic work the department is performing is the development of high-speed ground transportation to relieve traffic congestion.

The Office of High-Speed Ground Transportation is experimenting with potential future transport vehicles such as air-cushion trains, vacuum-tube subways, and magnetic overhead passenger cars. The most recent introduction of high-speed ground transport is planned for 1968, when the Washington to New York high-speed trains are to go into operation. Traveling at more than 100 miles per hour, these trains are merely forerunners of what the Department of Transportation plans.

As the quest for faster ground transportation continues, the technology of aviation advances, too. "Jumbo jets," with a capacity of up to 300 passengers, will be entering service on the world's airlines within a relatively short period of time, Faster-than-sound supersonic transports are expected to be flying passengers by late 1974. Because of the high development costs of this project, the government has become an investor with private industry, thus affording the United States an opportunity to compete with programs such as those of the British-French Concorde and the Russian TU–144.

Fresh, advanced methods of traffic control are coming off the drawing boards and should help to relieve congestion on the highways. More radar-controlled intersections will come into operation in the near future. Signals will determine when traffic has reached the congestion stage and will automatically switch the intersection to opposite directions to clear logjams.

New parking rules within core areas of cities will become standard as the metropolitan centers work to extricate themselves from a morass of machines. Experimental programs have been under way for some time in some cities where downtown parking has been banned altogether to permit the smoother movement of automobiles.

The job of the Department of Transportation is to coordinate these many and far-flung aspects of transportation into a strong system capable of growing with America. (See also AUTOMOBILES; AVIATION; RAILROADS; and the Index entry TRANSPORTATION.)

ALAN S. BOYD
Secretary of Transportation

THE NEW YORK TIMES

HIGH-SPEED passenger train rushes past depot at Princeton Junction, N. J., during a test run.

TRAVEL

UPI

THE END OF AN ERA in international travel is symbolized by a speedy jet aircraft overtaking the luxurious *Queen Mary*, shown here on her final voyage.

TRAVEL

The changing patterns of tourism continued to be felt in the pleasure-travel business in 1967. Strong competition brought cheaper group air travel despite generally rising costs, and qualifying for the low rates became easier. Large travel clubs were founded, and others expanded rapidly, increasing the number of potential travelers. Luxury ships and trains were retired from passenger transportation and used for cruising and touring. Cruise ships nosed into smaller and more exotic ports of call. Flexibility in cruises increased as winter package tours were introduced, in which the tourist traveled by air, rail, or bus to a warmwater port and then boarded a ship. Air carriers of several countries entered the hotel business. The "Discover America" program promoted travel in the United States, and the United Nations sponsored the 1967 International Tourist Year.

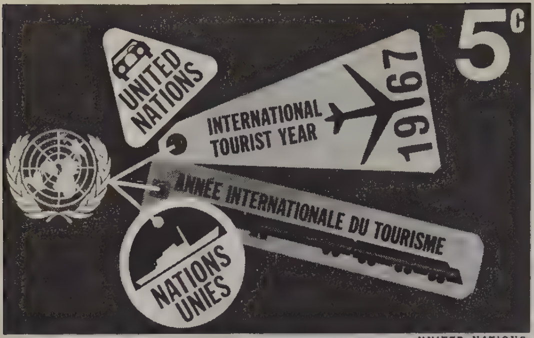
Proposed Tax. On Jan. 1, 1968, President Johnson announced that he would seek a tax on travel expenditures outside the Western Hemisphere to make up the $2 billion travel deficit in the international balance of payments. A plan of the proposed curbs, including a tax on spending above $7 a day, was outlined before Congress in February. The tourist industry expressed concern over the plan, which would be effective for two years.

International Tourist Year. The United Nations in 1967 issued special postage stamps and generally promoted travel. UN Secretary General U Thant told the International Union of Official Travel Organizations early in the year that the two main international aspects of tourism are (1) its economic value to a country, especially as a means of obtaining foreign exchange; and (2) its promotion of social, educational, and cultural values, and its fostering of tolerance and understanding that help to promote world peace.

By and large, however, International Tourist Year brought about very little that would not have happened in the normal course of events. The United States allowed passengers in transit to stay in the country for periods of up to 10 days without visas. It joined with more than 50 other nations in accepting the so-called Florence Agreement to permit mutual duty-free importation of tourist literature. On April 15 the United States issued lifetime visas on a selective basis to nationals of countries not requiring visas for Americans. Health and immigration authorities experimented jointly at New York International Airport with a program to reduce inspection time for international passengers.

As of June, travelers arriving in the United States from Mexico were no longer required to present a certificate of vaccination against smallpox. In September the U. S. government, the airlines, and the communications industry teamed up to conduct an experiment using the Early Bird satellite for advance transmission of information on passengers in flight from Germany to Washington, D. C., in an attempt to speed the entry of international travelers. The U. S. Travel Service designed and printed a poster to distribute abroad for International Tourist Year, and all USTS offices overseas noted the year and its objectives.

Travel Trends. A distinctly new trend in the development and expansion of tourist facilities in 1967 was the inclusion of small, sometimes exotic, but always off-the-beaten-track ports of call for cruise ships. Traditionally, the steamship industry has supplemented its transatlantic transportation income by sending its vessels at slack periods into the prosperous Caribbean, South American, Mediterranean, and Scandinavian cruise trade. In recent years transatlantic steamship crossings have declined with the growth of air traffic, forcing the ocean carriers to develop new and more varied cruises. Previously, most ships were too big to call at other than major ports, but with the introduction in 1966 of new vessels of shallow draft, with mainly luxurious



UNITED NATIONS

STAMP issued by the United Nations commemorates 1967 as International Tourist Year, sponsored by the UN as an aid to commerce and mutual understanding among nations.

cruise-type accommodations, a number of ports were added. These included Cozumel Island near Mexico, Kralendijk on Bonaire Island, and Porlamar on the Venezuelan island of Margarita, all in the Caribbean; and in the Mediterranean, Sardinia and its offshore island of La Maddalena, the Italian Adriatic ports of Bari and Manfredonia, and even Miramare, a castle just north of Trieste. In the Pacific, new points included Nukuhiva in the French-owned Marquesas; Chilung (Keelung), the chief port of Taiwan; Jesselton in Sabah (North Borneo), Malaysia; Tamatave on the island of Madagascar; and the Seychelles Islands in the Indian Ocean.

Another change was the elimination of two days of often unpleasant weather on cruises prior to reaching, for instance, the placid warmth of the Caribbean. Several airline and steamship companies combined forces to fly passengers from Montreal, Boston, New York, Philadelphia, and Baltimore to Curaçao and other Caribbean points to pick up cruise vessels. Railroad and bus companies also combined their services to Florida, Louisiana, and Texas with steamship services in the Caribbean.

Another development was the proliferation of travel clubs—of people who banded together, bought their own aircraft, and took off on planned tours; or who leased equipment for two or three trips a year; or who joined Eastern Air Lines' Travel Club, launched at midyear, to take advantage of discounts on certain facilities and services. The world's best-known such club, Club Méditerranée, with 400,000 members in France, established a New York office, enrolled 20,000 U. S. members, and announced that Club "villages" would open by November 1968 on Guadeloupe and Isla Mujeres in the Caribbean; others are planned for Martinique and Acapulco.

Britain remained "in" and "swinging," and other tourist areas of Europe endeavored to follow suit. U. S. tourism in France remained relatively light. The Arab-Israeli clash and consequent restriction on U. S. travel to certain Arab lands caused some tourists to discover Yugoslavia and Turkey. The unusual Antarctic tours introduced successfully in 1966 were continued with equal success in 1967. A New York company put together what it called a hotel train, to be leased for journeys anywhere on the North American continent. Luxury-conducted train tours of the United States also were offered.

Tourism. Throughout 1967 the travel industry itself was struggling to control the forces it had unleashed over the previous decade. These found both real and symbolic expression in the retirement of the Cunard liners *Queen Mary* and *Queen Elizabeth*, the related demise of 33 of the great passenger trains of the Santa Fe Railroad, and the birth of the massive group movements by air on an unscheduled basis. The speed, capacity, and economy of jet aircraft were changing the travel world completely.

The year 1967 began amid confusion in the travel industry. The Civil Aeronautics Board had earlier given the supplemental (nonscheduled) airlines authority to operate low-cost, all-inclusive tours on domestic flights. The board then extended this

CLUB MÉDITERRANÉE

TOURIST HIDEAWAY in the Lipari Islands, near Sicily, is operated by Club Méditerranée, a tourist club with a large European membership. In 1967 the club opened an office in New York City.

authority to international tours. The scheduled carriers fought this grant in court throughout the year. This extension to the supplementals caused the scheduled airlines such concern that they hurriedly announced a round-trip transatlantic fare of $230. This special fare, called a group inclusive tour (GIT) fare, was instituted on the assumption that the supplemental airlines would otherwise take away a large portion of regular transatlantic traffic.

The GIT fare was ushered in amid such great confusion, and with such false promises, that the public was thoroughly misled as to how the fare could be used. It took six months for the industry to smooth out the marketing of trips on GIT fares.

"Group movement" brought travel opportunities to a vast number of people. For example, a 14-day tour of Japan, Hong Kong, and Hawaii, including transportation, accommodations, and all meals, cost each member of the group $890. The regular round-trip economy air fare alone was $1,121.50. The companies involved in this group market scheduled similar trips by the hundreds within the United States, to Mexico, to the Far East, and to Europe throughout 1968. These were not cut-rate programs, but first-class and luxury tours.

Domestically, certain tour operators joined with supplemental carriers to promote extensive programs of inclusive-tour charter flights. Thousands of people flew to Hawaii, Las Vegas, and the west coast at a cost (for the entire tour) less than the economy air fare. A $30 million contract was signed by a Boston tour operator, American International Travel Service, and Trans International Airlines, an Oakland-based supplemental, for both domestic and international inclusive-tour charter flights and other group flights throughout 1968.

Several internationally scheduled airlines, preparing for the inauguration of the "jumbo" jets, invested in hotels, despite the objections of hotel interests. Trans World Airlines purchased control of Hilton International (hotels); Braniff announced that it would develop resort hotels in Peru and other South American countries; and British Overseas, Japan Air Lines, and Pakistan International Airlines, among others, invested with hotel-chain managements in building hotels abroad.

One further matter was debated by airline managements: what "extras" could they offer to induce additional traffic on jumbo jets without forcing fares to rise? Or would the passenger of 1970 be content with a "no frills" bus-type operation?

Legislation was enacted in Congress forcing steamship companies to disclose safety standards of each of their vessels in all advertising—a result of the 1966 cruise tragedies in the Caribbean. Coast Guard enforcement of these regulations came under fire, but at year's end the new rules remained in effect.

The railroads at last approved reduced rates for travel agents and began an expansion of tour programs to lift the flagging rate of railroad seat occupancy. But the new approach had barely begun when the Santa Fe applied to the Interstate Commerce Commission for permission to drop 33 of its major passenger trains, including the Chief, and a dozen other roads announced they could no longer maintain many of their major passenger schedules.

EXPENDITURES OF U. S. TOURISTS ABROAD

Area	1964	1965	1966
Canada..........	$ 550,000,000	$ 600,000,000	$ 678,000,000
Mexico..........	490,000,000	540,000,000	575,000,000
Europe and Mediterranean......	800,000,000	864,000,000	920,000,000
West Indies and Central America.	190,000,000	220,000,000	259,000,000
South America.....	57,000,000	68,000 000	65,000,000
Other.............	124,000,000	146,000,000	160,000,000
Total..........	$2,211,000,000	$2,438,000,000	$2,657,000,000

Source: *1967 Statistical Abstract of the United States.*

UPI

CROWDS PASSING THROUGH CUSTOMS are a common scene at U. S. airports as international air travel booms.

Travel agents were beleaguered by an unbelievable complexity of air fares, the incursion of large national banks and department stores into the travel agency business, and the competition of so-called non-profit organizations operating their own tour programs. They sought relief through several federal agencies. Moves were made in a number of states to license travel agents, following allegations of misappropriation of funds and stranding of clients by fly-by-night promoters in New York, California, and Florida. These moves were defeated, mainly because the proposed legislation was considered ineffective. The American Society of Travel Agents sponsored bills in both houses of Congress to "register" travel agencies instead of licensing them.

Florida officials, fearing competition from Europe as jet travel became faster and cheaper, took the initiative in forming a Mid-America Tourist Council, representing almost all countries and territories bordering the Caribbean.

The Society of American Travel Writers, at its 1967 convention in Turkey, was told that members' travel articles following its 1966 convention and tours in Canada were believed to have generated over $10 million worth of tourism in Canada.

EWEN C. GILLIES
"Travel Trade" Magazine

TREASURY DEPARTMENT. See BUDGET, U. S.; COIN COLLECTING.

TRINIDAD AND TOBAGO • Information Highlights

SOUTH AMERICA

Area: 1,980 square miles (5,128 sq km).
Population: 1,000,000 (July 1, 1966 est.).
Chief Cities (1960 census): Port of Spain, the capital, 93,954; San Fernando, 39,830; Arima, 10,982.
Government: *Governor General*—Sir Soloman Hochoy; *Prime Minister*—Eric E. Williams (took office Nov. 1966). *Parliament*—Senate, 24 members; House of Representatives, 36 members (party seating, People's National Movement, 25; Democratic Labour party, 11).
Religious Faiths: Roman Catholics, 35% of population; Hindus, 23%; Anglicans, 21%; others, 21%.
Education: *Literacy rate*, 80% of population aged 10 and over. *Total school enrollment* (1964)—242,649 (primary, 207,265; secondary, 33,641; technical, 1,051; higher, 692).
Finance (1966 est.): *Revenues*, $136,118,000; *expenditures*, $154,244,000; *public debt*, $151,437,000; *monetary unit*, Trinidad and Tobago dollar (2 dollars equal U. S.$1 as of Nov. 22, 1967).
Gross National Product (1964): $601,000,000.
National Income (1964): $474,000,000; average annual income per person, $500.
Cost of Living Index (1966): 121 (1958=100).
Manufacturing (metric tons): Gasoline (1965), 2,126,000; cement (1966), 212,400; sugar (1966), 203,000.
Crops (metric tons, 1965–66 crop year): Citrus fruits, 45,000; cacao beans (1966–67), 5,300; coffee, 3,300.
Minerals (metric tons, 1964): Crude petroleum (1966), 7,884,000; sand and gravel, 919,000; limestone, 808,000.
Foreign Trade (1966): *Exports*, $427,123,000 (chief exports: petroleum, $338,483,000; sugar, $18,770,000); *imports*, $457,880,000 (chief import: crude petroleum, $225,168,000). *Chief trading partners* (1965): U. S. (took 32% of exports, supplied 17% of imports); Britain (took 16% of exports, supplied 17% of imports).
Transportation: *Roads* (1964), 4,000 miles (6,400 km); *motor vehicles* (1965), 67,734; *railways* (1964), 109 miles (175 km); *civil airline*, British West Indian Airways; *principal airport*, Piarco (near Port of Spain).
Communications (1967): *Telephones*, 42,487; *television stations*, 2; *television sets*, 32,000; *radios* (1965), 165,000.

TRINIDAD AND TOBAGO

The prospect of a growing number of unemployed people was the main concern of the Trinidad and Tobago government in 1967.

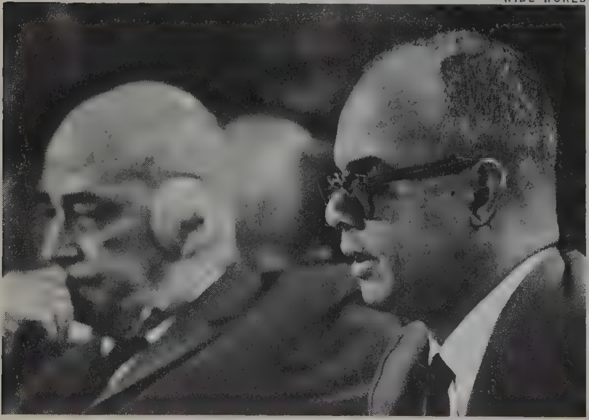
Economy. Estimates in late 1967 placed the unemployed at 17% of the labor force in the capital city of Port of Spain. Three causes for alarm in the area of unemployment were (1) a growing population of over 1 million; (2) retrenchment in the oil industry, in which two companies have announced their intention of laying off almost 3,000 laborers by 1969; and (3) a thinning out of government office employees to reduce overhead and thus qualify for foreign loans.

With the growing automation of the oil-refining industry, the government proposed a new series of contracts and conditions for continued operation and expansion of the industry in Trinidad. Among these conditions were incentives for further drilling and exploration.

The prime minister, Eric Williams, who also holds the combined portfolios of finance and development and planning, announced a new short-term development program to supplement the second 5-year development program, due to end in 1968. The new program, involving an additional investment of over $11 million (2 Trinidad and Tobago dollars equal U. S.$1) will bring three new tourist hotels to the islands and six additional factories.

ERIC WILLIAMS (*right*), prime minister of Trinidad and Tobago, speaks at the OAS meeting in Uruguay in April.

WIDE WORLD



Now formally a member of the Organization of American States, Trinidad and Tobago is eligible for Alliance for Progress funds. In November the Export-Import Bank announced the approval of a $6.6 million loan for power-generating equipment. Earlier in the year the World Bank announced a loan for highway construction. For the first six months of 1967 exports exceeded imports by $34 million.

Politics. Politically, the Democratic Labour party continued its boycott of Parliament, where in the opposition it holds 11 seats in the lower chamber and 4 seats in the Senate. This questionable tactic was in protest against the use of voting machines.

At a meeting of the heads of West Indian governments, Prime Minister Williams pledged his country's full cooperation in the setting up of the Caribbean Economic Community.

THOMAS G. MATHEWS
Director, Institute of Caribbean Studies
University of Puerto Rico

TROWBRIDGE, Alexander B. See biographical sketch under UNITED STATES.

TUNISIA

Tunisia in 1967 sought a rapprochment with the United Arab Republic (UAR) and other Arab states, when Israeli-Arab relations worsened.

President Habib Bourguiba suffered a heart attack on March 15, but he was able to resume some of his duties by the end of the month. In November 1966 the National Assembly had approved a constitutional amendment transferring the power to select a temporary successor to the president from the council of ministers to the council of the republic.

Relations with Other Arab States. Differences between Tunisia and other Arab states impelled President Bourguiba on January 3 to charge the UAR with "blackmailing" some of the Arab states for the purpose of alienating them from Tunisia. Tunisia had severed diplomatic relations with the UAR in 1966, and on February 11 it also broke relations with the pro-UAR government of Yemen.

Tunisia was also concerned by the rapid strengthening of Algeria's army with Soviet weapons, and it was reported in January that Tunisia had vainly sought modern U. S. arms.

Middle East Crisis. On February 18, King Hussein of Jordan appealed to Bourguiba to help save the Arab League. Bourguiba favored peaceful settlement of the Israeli-Arab dispute, but by May 31 he said that his government would take part in any concerted action if it was "well intentioned."

With the outbreak of war on June 5, Tunisia opened its territory for the passage of North African troops. Bourguiba stated that despite his friendship for Britain and the United States, he could not "remain silent when the right of the [Arab] people to take back their homeland is at stake." On the same day, anti-U. S. and anti-British riots broke out in Tunis. A week later Cairo and Tunis resumed diplomatic relations.

WIDE WORLD

TUNISIAN demonstrators overturned cars and tried to burn British Embassy in Tunis on June 5 in protest against alleged British intervention in the Israeli-Arab conflict.

After the cease-fire, Tunisia voted with other Arab states in the UN General Assembly for the Yugoslav resolution, which demanded Israeli withdrawal from territories it had occupied, but which did not label Israel an aggressor. However, on July 5 a Tunisian spokesman deplored the Arabs' "negative voting" which ignored the reality of an Israel recognized by most nations. Bourguiba, also, stated that the lesser evil for Arabs "would be to end the state of belligerency in order to recover the lands which have been conquered by the Jewish state."

One result of the crisis was a tightening of Tunisia's draft law. All men aged 20 years and over, regardless of origin, must serve for one year.

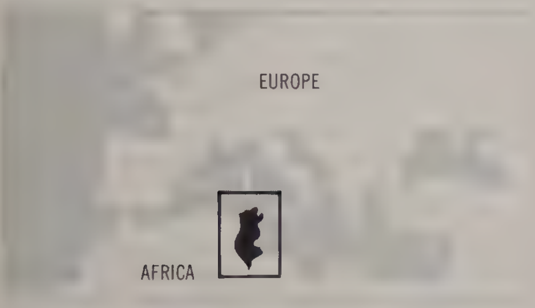
Relations with Communist China. In the August 23 speech Bourguiba endorsed the U. S. policy in Vietnam and warned against what he called Communist China's expansionist aims. Thereupon, Chinese Communist representatives in Tunisia, whose propaganda activities had been restricted, sent the president a note charging him with "siding with American imperialism." Tunisia expelled the members of the Chinese embassy from the country on September 23.

Economic Developments. Tunisia's gross national product rose in 1966 despite the effects of a drought. The unfavorable balance of payments, which mounted to $181 million in 1965, continued and made it necessary to maintain import restrictions and to reduce capital expenditures. When Secretary of State Bahi Ladgham submitted the 1967 budget to the National Assembly, he warned that Tunisians would have to practice greater austerity in 1967 and 1968. The International Monetary Fund had allotted Tunisia $9.6 million in December 1966 to help reduce the deficit.

In 1967, Tunisia signed trade agreements with Nationalist China, the United States, Kuwait, West Germany, and the USSR. Italy agreed to help Tunisia become an associate member of the European economic Community, to provide regular steamship service between Naples and Tunis, and to lend Tunisia $30.4 million. The International Bank for Reconstruction and Development and the International Development Association announced on February 17 that they would lend Tunisia $12 million and $6 million, respectively, to help finance an agricultural project.

JOHN NORMAN
Pace College Westchester

TUNISIA • Information Highlights



Area: 63,378 square miles (164,150 sq km).
Population: 4,470,000 (mid-1966 UN est.).
Chief Cities (1963 est.): Tunis, the capital, 680,000; Sfax, 65,635; Sousse, 48,172; Bizerte, 44,681.
Government: *President*—Habib Bourguiba (took office in 1957); *Parliament*—National Assembly, 90 members (all members of the Destourian Socialist party).
Religious Faiths: Muslims, 92% of population; Jews, 1.5%; Roman Catholics, 1%; others, 5.5%.
Education: *Literacy rate* (1956), 16% of population aged 10 and over. *Total school enrollment* (1966)—837,587 (primary, 734,000; secondary, 80,000; teacher-training, 1964, 3,971; technical, 1964, 10,372; higher, 5,000).
Finance (1966 budget est.): *Revenues*, $224,000,000; *expenditures*, $288,000,000; *monetary unit*, dinar (0.525 dinar equals U. S.$1).
Gross National Product (1965): $935,816,000.
Economic Indexes (1966): *Mining production*, 121 (1958=100); *agricultural production* (1965), 132 (1956–57=100); *cost of living*, 112 (1958=100).
Manufacturing (metric tons, 1965): Cement (1966), 477,600; wine, 185,000; gasoline (1964), 76,000.
Crops (metric tons, 1965–66 crop year): Olives, 272,000 (ranks 5th among world producers); wheat (1967), 390,000; grapes, 242,000; citrus fruits (1966–67), 90,000.
Minerals (metric tons, 1965): Phosphate rock, 3,040,000; iron ore (1966), 1,267,200; salt, 356,000; lime, 168,000.
Foreign Trade (1966): *Exports*, $140,306,000 (chief exports: phosphates, $34,996,000; olive oil, $25,590,000; wine, $8,244,000; wheat, $6,854,000); *imports*, $249,843,000 (chief imports, 1965: nonelectrical machinery, $44,078,000; textile yarn and fabrics, $23,879,000; iron and steel, $21,050,000). *Chief trading partners* (1965): France (took 31% of exports, supplied 41% of imports); U. S. (took 2% of exports, supplied 16% of imports).
Transportation: *Roads* (1966), 9,662 miles (15,546 km); *motor vehicles* (1965), 84,962 (automobiles, 57,656); *railways* (1965), 1,488 miles (2,394 km); *merchant vessels* (1966), 9 (19,000 gross registered tons).
Communications (1967): *Telephones* (est.): 36,000; *TV stations*, 2; *TV sets*, 5,500; *radios* (1964), 306,000; *newspapers* (1965), 5 (daily circ., 81,000).

TUNNELS

Tunnels were dug under land and water in many parts of the world in 1967 to meet the needs for subways, railroads, highways, water, sewage disposal, and utility lines. More than 20 major cities in the United States, Europe, and Japan were constructing subways or planning to build them; these projects involved nearly 150 miles(241 km) of tunnels.

California. For San Francisco, the Bay Area Rapid Transit (BART) District is constructing a 75-mile (121 km) rapid transit system that includes both underwater and underground tunnels. The target date for full operation of the system, which will cost at least $1 billion, is 1971. The key link in the system is the 3.6-mile (5.8 km) Transbay Tube connecting San Francisco with East Bay communities. This submerged-tube type of tunnel has 57 sections, each 330 feet (101 meters) long and 48 feet (14.6 meters) wide, sunk in water as deep as 120 feet (37 meters). The tube will carry two trackways; on completion in 1969, it will be the longest and deepest crossing of its type. BART also will build 16 miles (26 km) of subway under San Francisco; it is now constructing a 1-mile (1.6 km) section under Market Street.

Several tunnels are being constructed to carry water from abundant upstate sources to water-poor communities in southern California. One of the largest is a 4.7-mile (7.6-km) tunnel being driven through the Tehachapi Mountains.

New York. In New York City, a 5 mile (8 km) water tunnel, 925 feet (282 meters) under the Narrows between Brooklyn and Staten Island, is scheduled for completion in 1968. The 10-foot-diameter (3 meter) tube will deliver 300 million gallons (1.1 billion liters) of water daily to Staten Island.

Railroad and Highway Tunnels. The 7-mile (11.3 km) Flathead railroad tunnel, second longest tunnel in the United States, is expected to be holed through in 1968. The tunnel, which is being bored through rock, is part of a new route for the Great Northern Railway in Montana; rerouting was necessitated by the construction of the Libby Dam. The 7.9-mile (12.7-km) Cascade Tunnel, also on the Great Northern route, is the longest tunnel in the United States.

In Colorado, the 1.7-mile (2.7-km) Straight Creek Tunnel will bore through the Continental Divide near Loveland Pass at an altitude of 11,000 feet (3,350 meters). When completed as part of the Interstate Highway System, it will be one of the highest vehicular tunnels in the world.

Other Countries. London expects to have its 10.5-mile (16.9-km) Victoria Underground line in operation by 1969. London Transport will extend this subway line an additional 3.5 miles (5.6 km) south from Victoria Station to Brixton; this section of the line will pass under the Thames River.

The much-discussed 23-mile (37-km) English Channel Tunnel between France and England is still in the planning stage; financial backing is needed.

Paris is adding a 28.5-mile (46-km) east-west rapid transit line to its Metro system. The underground sections will have 33-foot-diameter (10-meter) tubes.

Vienna soon will begin a 24-mile (39-km) subway program that will continue over the next 12 years. Prague plans to start construction shortly on 18 miles (28 km) of subway tunnel. Munich is working on a 9-line subway system that will eventually have 22 miles (35 km) of underground lines.

Spain and France have joined forces to bore a 2-lane 9,882-foot (3,013-meter) highway tunnel through the Pyrenees Mountains to be completed by 1970.

Rotterdam has a 3,410-foot (1,039-meter) Maas River Tunnel for the Metro, the first subway line to be constructed in the Netherlands. The city also has a new 4-lane, 4,265-foot (1,300-meter) sunken-tube vehicular tunnel under the Maas River.

In Belgium, Antwerp is building a sunken-tube, 2,000-foot-long (610-meter), 156-foot-wide (45-meter) tunnel under the Scheldt River to carry six lanes of traffic, a railroad, and a bicycle path.

Future Work. Mexico City is planning a rapid transit system with an extensive tunnel network. Two lines, one north-south and the other east-west, will have a junction point at the center of the city.

BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

EARTH BORING MACHINE (MOLE)

GIANT EARTH-BORING MACHINES such as this one, called a "Mole," are used in tunneling through earth, sandstone, and hard rock.

CAVE-IN of a water tunnel near Gorman, Calif., in December ends happily when rescue crew reaches 17 men who were trapped.

UPI

Washington, D.C., expects to start work in 1968 on a 25-mile (40-km) rapid transit system, of which 13 miles (21 km) will be from 30 to 140 feet (9 to 43 meters) underground.

In Japan, Tokyo has a 51-mile (82-km) subway system which is being extended at the rate of 6.25 miles (10 km) per year. Plans call for an eventual 150-mile (241 km) system. Japan also expects to start building in 1968 the 5.3-mile (8.6-km) Ena Tunnel, part of a 153-mile (166-km) expressway linking the east and west coasts of Japan. The bore will be the second longest highway tunnel in the world; the 7.25-mile (11.7-km) Mont Blanc Tunnel under the Alps is the longest highway tunnel.

Switzerland hopes to construct the world's longest highway tunnel, 10.2 miles long (16.4 km) at the Gotthard Pass in the Alps; financing is needed.

Tunneling Machines. The use of tunnel-boring machines is increasing throughout the world, especially where earth, clay, sandstone, or shale is encountered. These machines, called mechanical moles, have rotating cutter heads with sharp teeth that work like a huge drill. They can bore holes up to 30 feet (9.1 meters) in diameter. With the use of tungsten carbide teeth, the machines can even be used in some hard-rock tunnels, thus replacing the slower drilling and blasting method of excavation. In extremely hard rock, however, progress with the moles may be so slow that conventional drilling and blasting may be more economical.

William H. Quirk
"Engineering Construction World"

TURKEY

Turkey's foreign relations in 1967 were dominated by a confrontation with Greece over conditions on Cyprus that brought the two nations to the brink of war in the late fall.

Foreign Affairs. In September the Greek and Turkish governments conferred on the Cyprus issue, only to reaffirm their adamant positions, and in mid-November, following a clash on Cyprus in which 24 Turkish and 2 Greek Cypriots were killed, Greek and Turkish forces were mobilized.

On November 22, President Johnson sent Cyrus Vance, former deputy secretary of defense, to the area in the hopes of easing the tension. The North Atlantic Treaty Organization (NATO) sent its secretary-general, and UN Secretary-General U Thant dispatched a special emissary. On November 24 the UN Security Council urged restraint on both sides.

By November 28 the threat of war seemed more remote, and negotiations had begun to bear fruit. On December 1 an agreement between Greece and Turkey was completed, and the terms of the accord were announced on December 3. In compliance with the appeal of U Thant, Greece and Turkey agreed to withdraw all of their military forces from Cyprus in stages—except for the troops stationed on the island under the 1960 Cyprus independence agreements. Turkey, which had readied an invasion fleet, agreed to halt all preparations for war.

Many of the underlying conflicts of the two nations over the Cyprus question remained unresolved, but the immediate danger was past.

On the other hand, Turkish relations with Yugoslavia, Bulgaria, and Rumania, as well as with France and Italy, moved on a more even keel in 1967. Turkey also moved closer to the Arab states, especially after the Israeli-Arab war of June 1967, and it generally supported the Arab position on the conflict in the UN General Assembly. More noteworthy, perhaps, were Turkey's diplomatic overtures to the USSR. Following his September visit to Moscow, Prime Minister Süleyman Demirel declared that his visit had eliminated "the last traces of hostility." The Turkish press reported that the USSR had agreed to open a $259 million loan for the construction of a third steel plant in Turkey.

Turkey's close relations with the United States, emphasized during President Cevdet Sunay's visit to Washington in April, had been under strain for years, partly because of the unresolved Cyprus question, and the strain continued in 1967.

Internal Affairs. A cabinet reshuffle on April 1 did not alter the prevailing government policy. On April 30, 48 members of the Republican People's party broke away and formed the Reliance party, under the leadership of Turhan Feyzioglu, a former deputy prime minister. The new group charged the older party with drifting toward the left.

Some 200 persons lost their lives, and many others were injured in three severe earthquakes (July 22-30) centering on the city of Adapazarı, about 150 miles (240 km) east of Istanbul.

Economy. The government continued its policy of encouraging private investment in an attempt both to develop a mixed economy on the basis of a reasonable profit system and to render Turkey self-sufficient in raw materials. A new 5-year plan—based on that of 1963–67, under which a gross national product of some $240 and a 7% rate of increase were achieved—was adopted on April 10. The 1967 budget, the largest in Turkish history, envisaged revenues of some TL18.3 billion (9 liras equal U.S. $1) and expenditures of some TL18.8

TURKEY • Information Highlights

EUROPE
AFRICA
ASIA

Area: 301,380 square miles (780,576 sq km).
Population: 32,901,000 (Oct. 20, 1966 est.).
Chief Cities (1965 prelim. census): Ankara, the capital, 130,373; Istanbul (urban area), 1,750,642; İzmir, 335,510.
Government: *President*—Gen. Cevdet Sunay (took office March 28, 1966); *Premier*— Süleyman Demirel (took office Oct. 27, 1965): *Parliament* (Grand National Assembly)—Senate, 185 members (party seating, 1966: Justice, 92; Republican People's, 50; other parties, 5; independents, 3; appointed, 15; life members, 20); National Assembly, 450 members (party seating, 1966: Justice, 239; Republican People's, 134; Nation, 29; New Turkey, 19; Turkish Labor, 15; Republican Peasants', 11; independents, 2; vacancy, 1).
Religious Faiths: Muslims, 99% of population.
Education: *Literacy rate* (1960), 38% of population aged 15 and over. *Total school enrollment* (1964)—4,446,862 (primary, 3,735,512; secondary, 478,595; teacher-training, 42,276; technical, 99,281; higher, 91,198).
Finance (1966 est.): *Revenues*, $1,786,000,000; *expenditures*, $1,862,000,000; *public debt*, $2,702,000,000; *monetary unit*, Turkish lira (9 liras equal U. S.$1).
Gross National Product (1966): $9,100,000,000.
National Income (1965): $7,588,000,000; average annual income per person, $242.
Economic Indexes (1965): *Industrial production*, 163 (1958=100); *agricultural production*, 142 (1956–57=100); *cost of living* (1966), 175 (1958=100).
Manufacturing (metric tons, 1966): Cement, 1,483,200; crude steel, 842,400; gasoline (1965), 716,000; sugar, 700,000; meat (1964), 170,000; olive oil, 140,000.
Crops (metric tons, 1966–67 crop year): Wheat, 10,940,000; barley, 4,500,000; sugar beets, 4,001,000; grapes (1965–66), 3,350,000; potatoes, 1,750,000.
Minerals (metric tons, 1966): Chromite (1965), 567,058 (ranks 3d among world producers); coal, 4,884,000; lignite, 3,564,000; crude petroleum, 2,040,000; iron ore, 1,656,000.
Foreign Trade (1966): *Exports*, $490,500,000 (chief exports: cotton, $128,200,000; tobacco, $106,900,000; hazelnuts, $53,200,000; raisins, $22,100,000; chrome, $10,400,000); *imports*, $724,600,000 (chief imports, 1965: nonelectrical machinery, $58,642,000; iron and steel, $50,715,000; crude petroleum, $48,395,000). *Chief trading partners* (1965): U. S. (took 18% of exports, supplied 27% of imports); West Germany (took 16% of exports, supplied 15% of imports).
Transportation: *Roads* (1964), 35,729 miles (57,499 km); *motor vehicles* (1965), 187,642; *railways* (1965), 4,907 miles (7,897 km); *merchant vessels* (1966), 106 (546,000 gross registered tons); *national airline*, Turkish Airlines.
Communications: *Telephones* (1966): 351,135; *television stations* (1965), 1; *television sets* (1965), 1,600; *radios* (1965), 2,443,000; *newspapers* (1961), 472.

billion with TL500 million to be covered, as in the past, by domestic savings and loans. Under the new plan some TL105 billion was to be invested in various industrial complexes for the production of aluminum and steel, in hydroelectric plants, and in the development of oil resources, as well as in agricultural development.

The newly built hydroelectric plant at Kesikkopru on the Kızılırmak, southeast of Ankara, was officially opened in 1967. Built entirely by Turkish engineers and labor, the dam is capable of storing 900,000 cubic meters of water and producing 250 million kilowatts of electricity annually. With the scheduled entry into service of the Keban and Gokcerkaya dams in 1970, Turkey's power requirements are expected to be met by 1975.

On January 4, President Sunay opened the 307-mile (494-km) Batman-İskenderun oil pipeline, with a capacity of 10,000-16,000 tons per day. It was hoped that the new pipeline, which cost some TL400 million, would encourage oil prospecting and stimulate production in the Siirt basin. A TL400 million pipeline company was to be founded, with 49% private capital. It was estimated that oil production had reached some 1.9 million tons and that, by 1968, production would total 2.5 million tons, to meet one half the national requirement. Turkey's current refining capacity was estimated at 5 million tons, although by 1970 the country would need 10 million tons of crude oil. The construction of a 4 million ton refinery at İzmir, begun in the spring of 1967, was to be completed well before 1970.

Construction of an $88 million copper complex at Samsun, financed in part by funds from the Agency for International Development (AID), was begun in the fall of 1967. Scheduled to be completed within three years, the facility will have an annual capacity of 40,000 tons of copper, 18,000 tons of chemical fertilizer, and 200,000 tons of sulfuric acid. A plant manufacturing electrically powered machinery was scheduled to be built at Balıkesır.

Education. The Middle East Technical University

WIDE WORLD

TURKISH TANK CREWS are assembled at port of Mersin for a possible invasion of Cyprus. The November dispute was settled peacefully.

in Ankara continued to expand. Begun in 1962, this institution had in 1967 a 600-member faculty and some 5,500 students. Another new university (Hacettepe), founded in Ankara in 1958, had by 1967 faculties of medicine, hygiene, and the social sciences.

HARRY N. HOWARD
The American University

UDALL, Stewart L. See biographical sketch under UNITED STATES.

UGANDA

In September 1967 a new constitution, establishing Uganda as a republic and conferring broad powers on the presidency, was approved by the Ugandan parliament.

Constitution. On September 8, the new republican constitution was approved by a vote of 62 to 0, with three opposition abstentions. President Milton Obote then officially declared Uganda a republic. The constitution abolished the traditional kingdoms of Buganda, Ankole, Bunyoro, and Toro, but granted pensions to all of their former leaders except Sir Edward Mutesa II, whose position as kabaka (or king) of Buganda has not been recognized since the political crisis of May 1966. Bunyoro, Ankole, and Toro each became districts, while Buganda was divided into four new districts—East Mengo, West Mengo, Masaka, and Mubende.

Incumbent President Obote remained in office, but future presidents will be elected indirectly. Under the provisions of the constitution the president, who is head of state and of government and commander in chief of the armed forces, has wide emergency powers, and possesses the authority to nominate enough members of the National Assembly to ensure the leading party a majority. The National Assembly has a term of five years, and an official opposition is no longer recognized. Finally, all local administrations are under the direct control of the central government.

Plot. Twenty-one persons were being held, pending trial, for plotting against the government on February 14–18. The government claimed that they had support from Rwanda and Burundi.

Anyanya. Ten Roman Catholic missionaries were expelled from Uganda on January 16 for allegedly providing assistance to the Anyanya terrorist society of Sudanese guerrillas, who operate in the southern Sudan against the Sudanese government. Occasionally, members of Anyanya have crossed into Uganda, where they have clashed with units of the Ugandan army and police. The Roman Catholic Church has been charged with providing the Anyanya with arms.

Foreign Affairs. Relations with Great Britain deteriorated in February over an incident involving British subjects who were allegedly handled roughly by Ugandan troops at a roadblock at Tororo. President Obote implied that the British high commissioner in Uganda, Roland Hunt, had plotted against Uganda by issuing a warning to British nationals about the roadblock. Although the issue was apparently smoothed over during the March visit to Kampala of British minister of state for commonwealth affairs George Thomas, the British High Commission announced in April that Hunt would be replaced.

On December 1, Uganda, Kenya, and Tanzania formally inaugurated the East African Community, which has been described as a "cautious step" toward a common market. In the treaty of cooperation signed by the three nations in Kampala on June 6, provision was also made for the creation of a development bank. Somalia and Zambia sought membership in the group.

Economic Affairs. On June 14, Finance Minister Laurence Kalule-Settala presented the budget for 1967–68. Revenue was estimated at £44 million and recurrent expenditures at £36 million. Most of the £8 million surplus was allocated to Uganda's development plan, which will cost some £15.4 million. Uganda's 5% development tax will be continued.

The International Development Association (IDA) announced in April that it would extend $10 million in credit to finance the building of educational facilities in Uganda. In July the IDA extended $5 million credit for road construction.

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University of California at Santa Barbara

UNESCO. See UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION.

UGANDA • Information Highlights

ASIA
AFRICA

Area: 91,133 square miles (236,036 sq km).
Population: 7,740,000 (mid-1966 est.).
Chief Cities (1959 census): Kampala, the capital, 46,735; Jinja, 29,741; Mbale, 13,569; Entebbe, 10,941.
Government: *President*—(Apollo) Milton Obote (took office April 15, 1966). *Parliament*—National Assembly, 90 members (party seating, 1967: Uganda People's party, 70; Democratic party, 6; Independent, 4; vacant, 10).
Religious Faiths: Roman Catholics, 32% of population; Anglicans and Protestants, 27%; Muslims, 5%; others, 36%.
Education: *Literacy rate* (1959), 25% of population aged 16 and over. *Total school enrollment* (1964)—546,855 (primary, 525,585; secondary, 12,652; teacher-training, 3,975; technical, 3,516; higher, 1,127).
Finance (1967 est.): *Revenues*, $131,500,000; *expenditures*, $168,300,000; monetary unit, Uganda shilling (7.14 shillings equal U. S.$1).
Gross Domestic Product (1966): $680,400,000.
Cost of Living Index (1966): 117 (1958=100).
Manufacturing (metric tons, 1966): Sugar, 152,000; cement, 122,400; meat (1964), 123,000; beer (1965), 18,700.
Crops (metric tons, 1966–67 crop year): Peanuts (1965–66), 163,000; cottonseed, 161,400; coffee, 156,000.
Minerals (metric tons, 1965): Lime, 20,000; apatite, 16,300; salt, 3,000.
Foreign Trade (1966): *Exports*, $187,740,000 (chief exports: coffee, $100,240,000; cotton, $42,840,000; copper, $16,240,000); *imports*, $120,120,000 (chief imports, 1965: transport equipment, $9,463,000; motor vehicles, $8,214,000; nonelectrical machinery, $7,437,000). *Chief trading partners* (1965): Britain (took 17% of exports, supplied 38% of imports); U. S. (took 23% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 31,332 miles (50,423 km); *motor vehicles* (1965), 39,201 (automobiles, 27,307); *international airlines* (1964) 8; *principal airport*, Entebbe.
Communications: *Telephones* (1966): 19,306; *television stations* (1967), 6; *television sets* (1967) 8,500; *radios* (1965), 200,000; *newspapers* (1964), 4.

UNION OF SOVIET SOCIALIST REPUBLICS

The greatest holiday celebration in the Soviet Union in many years occurred on Nov. 7, 1967—the 50th anniversary of the Bolshevik Revolution, which brought Russia's Communist regime into power. Moscow's major buildings were repainted and bedecked with posters and banners, ships on the Moscow River blazed with lights, and there was dancing in the streets. From all over the world, Communist leaders and delegations came to Moscow to participate in the festivities. So great was the shortage of hotel space resulting from this influx that many Western tourists were denied admittance into the country during the celebration. For weeks the Soviet press was filled with speeches and articles by Soviet and foreign Communist spokesmen praising various Soviet achievements.

Anniversary Reforms. In honor of the anniversary the Soviet government made a number of concessions to its people. A series of decrees in September introduced the following improvements, to take effect on Jan. 1, 1968: a rise in the minimum urban wage to the ruble equivalent of $66 per month; a 15% increase in the salaries of machine-tool operators; higher pay and more fringe benefits for workers in the far north; larger sickness payments to all state employees; greater pensions for disabled war veterans; an increase in the minimum length of paid vacations for state workers; and a 25% reduction in income taxes on monthly salaries of $67 to $88.

In addition, the retirement age was reduced by 5 years for collective farmers, with men henceforth retiring at the age of 60 and women at 55. Workers over retirement age in consumer services and medical institutions may draw both full pensions and full pay if they continue working. By November 1967, 82% of white-collar and industrial workers had been transferred from a 6-day workweek to one of 5 days (41 hours); this introduced the leisure weekend for the first time in Soviet history.

In early November most prisoners with short sentences were amnestied and released from prison camps. An earlier amnesty, in September, absolved the Crimean Tatars as a whole from an official indictment that they had collaborated with the invading Nazis in World War II. Though pardoned, the Tatars were not invited to return to the Crimea (from which they had been exiled) and were not allowed to re-create their former republic.

POLITICAL DEVELOPMENTS

Throughout 1967 the Brezhnev-Kosygin regime (Secretary-General of the Communist party Leonid I. Brezhnev and Premier Aleksei N. Kosygin) tried to maintain an appearance of internal harmony and success, so that unpleasant incidents would not detract from the 50th anniversary celebrations. How-

RIBOUD-BARBEY, FROM MAGNUM

USSR

> **"We take into account the lessons of the past and are doing everything so that no one should catch us unawares, and the Soviet people will not flinch if someone will be mad enough to make an attempt on the security of the Soviet Union and of our allies. This attempt, wherever it might come from—the north or the south, the west or the east—will encounter the all-conquering might of our armed forces."**
>
> *—Leonid I. Brezhnev, head of the Soviet Communist party, speaking at ceremonies marking the 50th anniversary of the Revolution, Nov. 3, 1967.*

STEEPLES AND DOMES of St. Basil's Church overlook huge parade in Moscow's Red Square for the Bolshevik Revolution's 50th anniversary.

ever, the news of the defection of Svetlana Alliluyeva, daughter of the deceased dictator Joseph Stalin, could not be suppressed. The outside world also was interested in several important changes of government personnel and other signs of political opposition.

The Svetlana Affair. Svetlana Alliluyeva left the USSR with official permission in December 1966 to visit India. On March 6, 1967, she requested asylum in the United States from the U. S. Embassy in New Delhi. Upon orders from Washington, the embassy flew her to Rome and then to Switzerland, where she went into hiding. Not knowing her intentions, yet forced to make some statement, the Soviet government publicly declared that she was a Soviet tourist who could stay abroad as long as she wished.

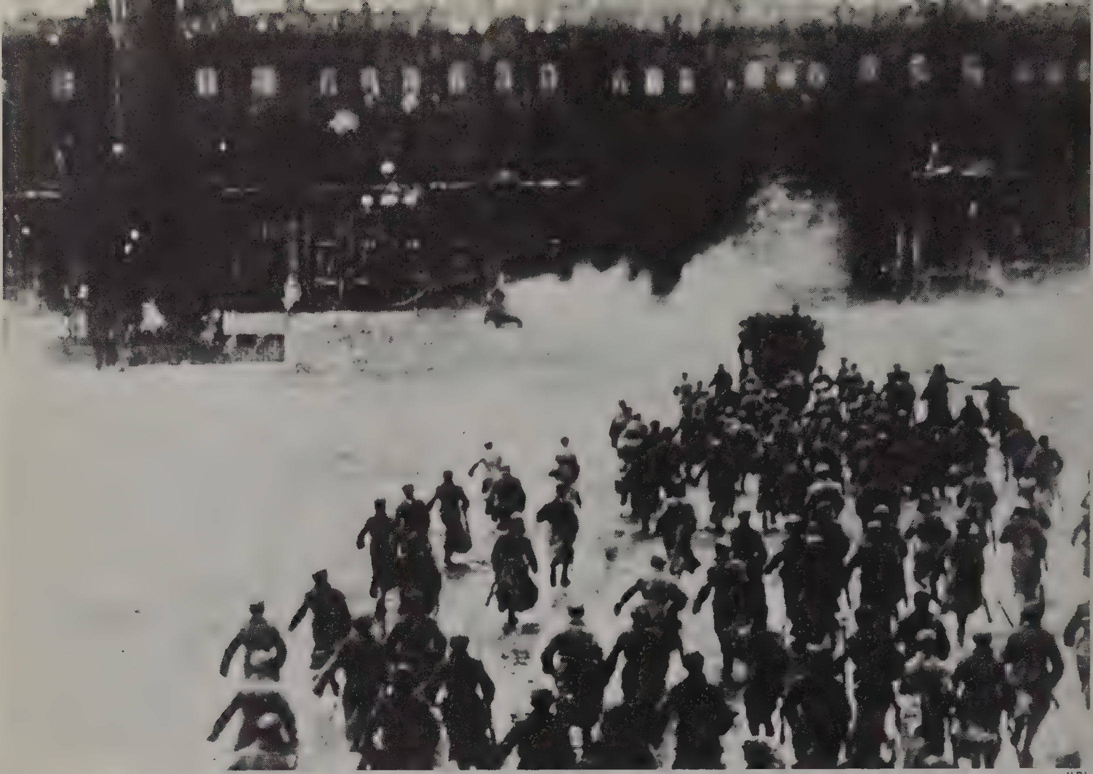
Then in April, Svetlana arrived in the United States, proclaiming that she sought freedom of expression and would publish her memoirs. The Soviet press reacted by calling her a U. S. prisoner, whose "memoirs" were dictated by the Central Intelligence Agency (CIA). When Svetlana publicly announced that she was happy to be in the United States, the Soviet press again changed its comment, now describing her as a Soviet defector, a money-seeker, the deserter of her two children (who remain in Moscow), and an immoral thrice-married woman.

Ivan A. Benediktov, the Soviet ambassador to India, with whom Svetlana had argued and from whose embassy she defected, was not punished. Instead, he received a high Soviet decoration, and was transferred to the post of ambassador to Yugoslavia. By late 1967 the Soviet government had not deprived Stalin's daughter of Soviet citizenship. Possibly she was also still a member of the USSR Communist party. (See also biography with this article.)

Personnel Shifts. Although trying to avoid purges during 1967, the Brezhnev-Kosygin regime demoted three high officials who opposed new "capitalist" economic reforms: Vladimir Y. Semichastny, Nikolai G. Yegorychev, and Aleksandr N. Shelepin. In May, Semichastny was dismissed as chief of the Committee of State Security (KGB, the secret police ministry), and demoted to vice premier of the Ukrainian republic. In June, Yegorychev lost his post as Communist party first secretary of Moscow; later he was removed from the Presidium of the Supreme Soviet and disappeared into oblivion. In July, Shelepin, a member of the Communist party's ruling Politburo, was transferred from his position as secretary of the party Central Committee to head the Soviet trade unions.

In the trade unions post, Shelepin replaced Politburo alternate member Viktor V. Grishin, who assumed Yegorychev's former position of Moscow party first secretary and his Presidium seat. The new police chief was Yuri V. Andropov, who previously

(Continued on page 694)



UPI

STORMING the Winter Palace in Petrograd, Bolshevik forces cross the palace square on the evening of Oct. 25, 1917.

THE BOLSHEVIK REVOLUTION
—50 YEARS LATER

The events of the October Revolution in Petrograd, leading to the overthrow of the provisional Kerensky government, have achieved a firm place in the history of the birth of the Soviet Union. The warning shot fired by the cruiser *Aurora*, the almost bloodless taking of the Winter Palace, are symbolic memories in the life of a state that is just old enough to honor its past.

UPI

VLADIMIR ILICH LENIN on a Petrograd street in 1917. After his death, in 1924, the city was renamed Leningrad.

CAPTAIN of the *Aurora* is pictured with the gun that he ordered fired in 1917 to signal attack on the Winter Palace.

UPI

VETERAN of the 1917 storming points toward the Winter Palace, which he and his fellow Bolsheviks took easily.

UPI

UPI

PORTRAIT OF LENIN overlooks Soviet leaders attending 50th anniversary opening ceremonies.

UPI

MISSILES, rocket launchers, and massed troops are lined up for inspection before a Moscow parade, Nov. 9, honoring the Revolution.

LIGHTS AND PORTRAITS decorating a building on Moscow's Gorky Street represent the several states in the Soviet Union.

UPI

had been ambassador to Hungary during the Hungarian revolution in 1956. Soon after this appointment, Andropov was made an alternate member of the Politburo, thus becoming the first high police official on that body since Lavrenti Beria, who was purged and executed in 1953.

Internal Opposition. The new economic reforms, basing plan fulfillment on enterprise profit rather than production, were also opposed in 1967 by three prominent Soviet periodicals: the magazine *Literary Gazette* and the newspapers *Komsomolskaya Pravda* and *Soviet Russia*. These publications are organs of the conservative Union of Soviet Writers, the Young Communist League, and the government of the Russian republic, respectively. All three argued that paying higher wages in profitable enterprises to stimulate production was too materialistic, and that laborers should work hard merely out of patriotism. Many local government and party officials slowed the introduction of the economic reforms or failed to implement them fully.

The most serious case of opposition came in October when Dmitri Polyansky, a Politburo member and USSR first vice premier, published an article in *Kommunist*, the magazine of the party Central Committee, criticizing the low appropriation for agriculture in the 1968 budget. Obviously, dissension existed even within the Politburo.

ECONOMY

The bases for Polyansky's complaint were revealed in the 1968 budget, the 1968 economic plan, and revisions in the 5-year plan (1966–70), all of which were adopted by a meeting of the USSR Supreme Soviet in October 1967. In comparison with that for 1967, the 1968 budget increased expenditures for conventional weapons by 15% and for weapons of mass destruction by 85%. To achieve this large armament increase and still keep the budget in balance, the shares of agriculture and transport were reduced. In addition, funds for construction of new housing will be 7% less in 1968 than in 1967, despite an acute housing shortage with an average of two or more persons living in each room in urban dwellings. Thus, agriculture, transport, and housing all are to be sacrificed to increased armament. In addition, more funds will be budgeted for scientific research, which is largely military, than for medical care for the entire Soviet population.

The cut in agricultural funds was not only for 1968. Revisions of the 5-year plan announced in 1967 indicate that state agricultural investment originally planned for the period will be reduced by 13%.

Industry. The one consolation for the Soviet consumer in the 1968 economic plans is that, for the first time since the 1920's, the growth of light consumer goods industry was scheduled to be faster than that of heavy industry. In 1967 heavy industry increased by 10.2% and light industry by 9.4%, but the corresponding figures for 1968 are planned to be 7.9% and 8.6%. The 1968 budget provides 56% more funds for light industry development than the 1967 one. Thus the Brezhnev-Kosygin regime is trying to alleviate the perpetual shortage of consumer goods, despite the large increase in armament. Even so, about three fourths of all industrial output will continue to be heavy industrial goods.

During 1967 the new economic reforms stimulated industrial production in general. One third of all Soviet industry had transferred to the new management system, whereby the plant director decides the number of his personnel and their pay, and plant performance is judged by sales rather than amount of production. The factories on the new system generally increased their sales, output, profits, and labor productivity. Perhaps more important, the rate of industrial growth in 1967 was 10%, compared with 8.4% in 1966 and 7.1% in 1964. The remainder of Soviet industry was due to transfer to the new management system in 1968.

The greatest increases in 1967 in output of major industrial products were for metals and chem-

USSR • Information Highlights

EUROPE
ASIA

Area: 8,649,489 square miles (22,402,200 sq km).
Population: 235,500,000 (1967 est.).
Chief Cities (1966 est.): Moscow, the capital, 6,395,000; Leningrad, 3,261,000; Kiev, 1,367,000; Tashkent, 1,127,000; Gorki, 1,100,000; Kharkov, 1,092,000; Novosibirsk, 1,049,000.
Government: *President*—Nikolai V. Podgorny; *Premier*—Aleksei N. Kosygin; *Communist Party Secretary-General*—Leonid I. Brezhnev. *Parliament* (Supreme Soviet)—Soviet of the Union, 767 deputies; Soviet of Nationalities, 750 deputies.
Religious Faiths: Russian Orthodox, 50% of population; Muslims, 10%; Protestants, 5%; Roman Catholics, 4%; Jews, 1%.
Education: *Literacy rate* (1967), 97% of adult population. *Total school enrollment* (1967)—52,104,000 (primary, 40,269,000; secondary, 7,976,000; university/higher, 3,859,000).
Finance (1967 est.): *Revenues*, $127,000,000,000; *expenditures*, $125,900,000,000; *public debt*, $28,700,000,000; *monetary unit*, ruble (0.9 ruble equals U. S.$1).
Gross National Product (1966): $228,088,000,000.
National Income (1967): $215,000,000,000; average annual income per person, $915.
Economic Indexes (1967): *Industrial production*, 220 (1958=100); *agricultural production*, 123 (1958=100); *taxation*, 175 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 96,900,000; cement, 79,992,000; cotton yarn, 1,320,000; newsprint paper, 744,000; machine tools, 191,000; meat, 10,800,000; electricity, 544,560,000,000 kw-hr.
Crops (metric tons, 1966): Wheat, 100,400,000 (ranks 1st among world producers); potatoes, 87,200,000 (world rank, 1st); sugar beets, 73,800,000 (world rank, 1st); barley, 27,800,000 (world rank, 1st); maize, 8,300,000 (world rank, 4th); sunflower seed, 6,100,000 (world rank, 1st); cotton, 5,980,000 (world rank, 2d).
Minerals (metric tons, 1966): Coal, 585,000,000 (ranks 1st among world producers); crude petroleum, 265,000,000 (world rank, 2d); iron ore, 160,000,000 (world rank, 1st); lignite, 146,436,000 (world rank, 2d); natural gas, 145,000,000 cubic meters (world rank, 2d).
Foreign Trade (1966): *Exports*, $8,841,000,000 (chief exports, 1965: equipment for complete industrial plants, $613,000,000; crude petroleum, $612,000,000; raw cotton, $335,000,000; sawn lumber, $306,000,000); *imports*, $7,910,000,000 (chief imports, 1965: ships and their equipment, $544,000,000; clothing, $431,000,000; wheat, $398,000,000). *Chief trading partners* (1965): East Germany (took 16% of exports, supplied 16% of imports); Czechoslovakia (took 11% of exports, supplied 13% of imports); Poland (took 9% of exports, supplied 9% of imports).
Transportation: *Roads* (1966), 825,000 miles (1,328,000 km); *motor vehicles* (1965), 4,391,000 (automobiles, 926,000); *railways* (1966), 80,700 miles (130,000 km); *merchant vessels* (1966), 1,360 (9,811,000 gross registered tons); *inland waterways* (1966), 87,500 miles (141,000 km); *principal airports*, Moscow, Leningrad, Kiev, Tashkent.
Communications: *Telephones* (1967 est.): 8,400,000; *television stations* (1967), 126; *television sets* (1967), 20,000,000; *radios* (1966), 38,100,000; *newspapers* (1966), 7,700.

LEONID ILICH BREZHNEV, secretary-general of the Soviet Communist party, continued in 1967 to share the national leadership with Premier Aleksei N. Kosygin. In his public pronouncements during the year he called for greater unity among the Communist powers of the world, criticized U. S. involvement in Vietnam, charged Israel with aggression against its Arab neighbors, and denounced the Chinese Communist regime as disruptive of the world Communist movement. He delivered the main address marking the 50th anniversary of the Revolution.

Brezhnev was born on Dec. 19, 1906, in Dneprodzerzhinsk in the Ukraine. A member of the Communist party since 1931, he rose through party ranks as a protégé of Nikita S. Khrushchev. During World War II he was a political commissar with the Red Army, and in 1952 he became a member of the Communist party's Central Committee. From 1960 to 1964 he was chairman of the Presidium of the Supreme Soviet (or titular chief of state) of the USSR. He and Kosygin took over power from Khrushchev in October 1964.

TASS, FROM SOVFOTO

icals. There were shortages of electricity, fuel, timber, construction materials, rolled steel, and large-diameter pipe. The food industry was not large enough to process the increased crops from the state and collective farms. The 1967 plan for both industrial and housing construction was underfulfilled.

Petroleum deposits were discovered in 1967 in the Belorussian SSR, where oil was previously believed not to exist. When mining is fully developed, this oil should benefit not only Belorussia but also the nearby Baltic Soviet republics and the city of Leningrad.

Agriculture. The Brezhnev-Kosygin agricultural reforms, which have raised the income of collective farms and collective farmers, continued to stimulate farm production during 1967. Despite adverse weather conditions, a fair grain crop of 155 million metric tons was harvested. The cotton crop was a bumper 6,000,000 tons, breaking all previous Soviet records. Other crops were reasonably good, and production of most types of livestock increased. However, for unexplained reasons, the hog population declined, resulting in an embarrassing shortage of leather shoes for sale in stores. Just before the anniversary celebrations, the shortage was remedied by shoe imports from both western and eastern Europe.

Collective farms have always had to pay their own way. State farms, which now hold half the agricultural acreage, in the past were largely subsidized by the government. In 1967 several hundred of the total 12,000 state farms were put on a new management system, similar to that being introduced in industry. Most farms on the new system yielded a profit, so the remaining state farms will be transferred to the new system in 1968.

The success of agricultural reforms apparently induced the government to cut budget appropriations for agriculture for 1968–70. Both the collective and state farms are still poorly mechanized, with about two-thirds of agricultural work being performed by primitive hand labor. Budget cuts will slow mechanization.

Transport. The 1968 plan will slow the rate of growth of freight transport to 5%, compared with the 1967 plan of 5.6%. In 1967 the largest increases in freight haulage were made by oil pipelines and the merchant marine, and the smallest by inland waterways. Railways, however, continued to be the backbone of Soviet transportation, hauling about 70% of all internal freight. During 1967, one tenth of railway traffic and one sixth of trucking were placed under a new system of management similar to that being introduced in industry and state farms. The experiment was successful, and more of the transport network will adopt the new system in 1968.

In June 1967 a 340-mile (547 km) Soviet-Czech pipeline was completed, sending Soviet natural gas into Czechoslovakia. This pipeline was being extended into Austria and may later be extended into Italy. In October another pipeline was opened within the USSR, linking gas fields in Soviet Central Asia with the Moscow region.

In March, for the first time in Soviet history, the USSR opened its northern sea route for use by foreign ships, provided that they pay a fee. This route extends from north European Russia to the Pacific Ocean via the Arctic Ocean and is kept open most of the year by Soviet icebreakers. As 1967 ended, no foreign ships had accepted the offer, for fear of being caught in the ice.

Aeroflot, the Soviet civil aviation company, in July made a test flight to Montreal, Canada, with a new jet plane, the IL-62, which flew nonstop from Moscow at an average speed of 460 miles (740 km) per hour. The plane, which can carry 150 passengers, also visited the United States in November. It will be used on the existing Montreal-Moscow air route and on the new Moscow-New York service, which was due to begin in 1968.

In October 1967 television was broadcast in color for the first time in the USSR. The transmissions originated from Moscow and Leningrad.

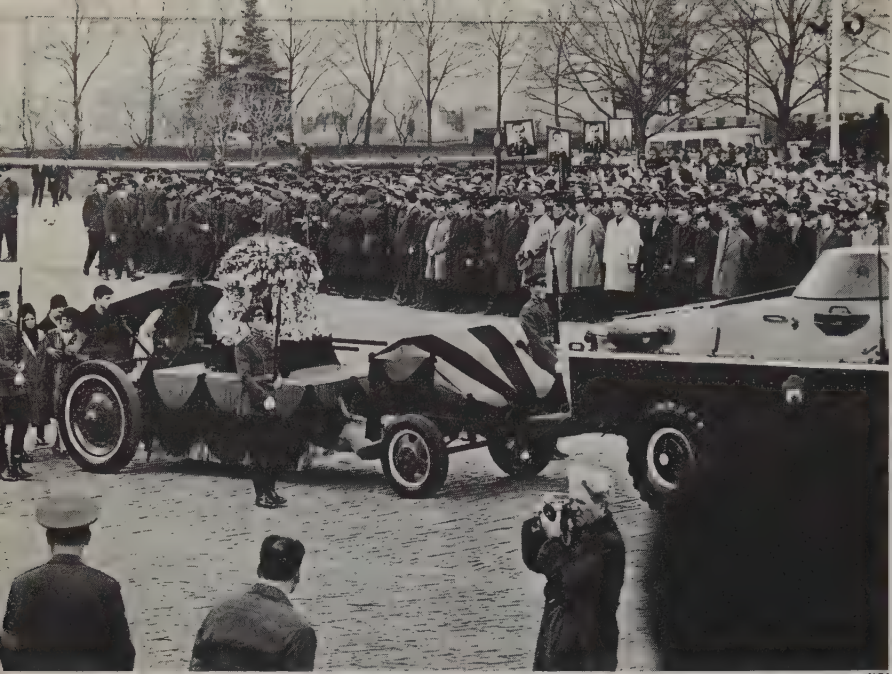
Foreign Trade. In 1967, as before, about 70% of Soviet foreign trade was carried on with other Communist nations, 20% with Western industrial countries, and 10% with underdeveloped lands of the non-Communist world. About two thirds of foreign trade was with Communist eastern Europe, which in turn received two thirds of its raw materials and fuel from the USSR. Soviet grain makes up two thirds of the cereal imports of eastern Europe. In exchange, eastern Europe sends machinery and manufactured goods to the USSR, including half the new merchant ships, two fifths of the electric locomotives, and one third of the railway passenger cars being put into service by the Soviet Union.

The main Soviet exports to Western nations were oil, lumber, furs, nonferrous metals, and coal. From the West, Russia mainly received machinery, ships, large-diameter pipe, chemicals, synthetic fibers, and textiles.

To the underdeveloped countries the USSR sent mostly machinery and manufactured goods, in return receiving mainly raw materials such as rubber and tropical foods such as coffee, cocoa, and tea. During the year, a Soviet-Afghan agreement provided that the USSR construct a pipeline for shipment of Afghan natural gas into Soviet Central Asia.

The rate of increase of all USSR foreign trade is planned to decline in 1968 to 7.4%, as compared with about 8% in 1967.

Manpower. In 1967, of the total 235,500,000 in-



UPI

FUNERAL for a cosmonaut, Vladimir Komarov, who was killed when his space ship crashed, April 24, after making 18 orbits of the earth. Komarov, the first reported Soviet space fatality, received a state funeral, and the urn with his ashes was buried in a Kremlin wall.

habitants of the USSR, 81,000,000 were state employees (including 7,000,000 state farmers), and 27,000,000 were collective farmers. Although rising, labor productivity was still low, being about half the U. S. level in industry and one fourth in agriculture.

Aside from the trade unions, to which the vast majority of state employees belonged, the largest mass organizations were the paramilitary Red Cross with 56,000,000 members; the defense society, at least 40,000,000 members; militarized sport societies, 35,000,000; and the Young Communist League (Komsomol), 23,000,000. About 5,500,000 Soviet citizens were serving as volunteer police, assisting in patrolling streets and parks during hours of darkness.

DEFENSE AND SPACE

Aside from planning increased expenditures for armament, the government undertook several immediate measures to strengthen Soviet defenses in 1967. In January about 50,000 Soviet troops were withdrawn from East Germany, presumably to be transferred to posts along the Chinese frontier. In February the Young Communist League began training the Pioneers (boys and girls 10 to 15 years of age) in military tactics. By autumn the Soviet Union had launched its first aircraft carrier (a ship carrying helicopters), and two additional helicopter carriers were under construction. In October a new military conscription law set the draft age at 18 and reduced the conscription period from 3 years to 2 in the army and air force, and from 4 years to 3 in the navy. However, the same law introduced 2 years of compulsory military training for students in high school, as well as at places of work for youths of high school age who are school dropouts.

Throughout the year the USSR also was constructing an antimissile defense system around Moscow. By late fall, according to U. S. intelligence, the USSR was developing a space satellite capable of firing nuclear-tipped missiles at ground targets while in orbit. (See also MISSILES.)

Armed Forces. The Soviet armed forces in 1967 were estimated to number 3,300,000 men. Their armament included 500 intercontinental rockets, 900 medium-range missiles, 200 long-range bombers, and 1,200 medium-range bombers. Naval forces included 20 cruisers, 130 destroyers, and 400 submarines. In addition to the regular armed forces, there were 250,000 police troops guarding the Soviet railways, cities, and frontiers.

Marshal Rodion Y. Malinovsky, the minister of defense, died on March 31, 1967, at the age of 69. He was succeeded on April 11 by Marshal Andrei A. Grechko.

Space Probes. Death occurred in the Soviet space program on April 24, 1967, when Col. Vladimir M. Komarov died as his spaceship crashed in landing because of a failure in its parachutes. This was the first Soviet space casualty publicly announced, and Komarov was the first man known to have been killed on a space flight.

Among the many unmanned space probes made by the USSR during the year, two were spectacular: on October 18 a Soviet space capsule made a soft landing on the plant Venus; and on October 30 two Soviet rockets circling the earth docked (coupled) in orbit and then disengaged. (See also SPACE EXPLORATION.)

CULTURE

Literature. The Brezhnev-Kosygin regime continued to treat dissident writers harshly. In January several editors of an illegal literary magazine were arrested and imprisoned. Later, a young Soviet writer was imprisoned for three years for leading a street protest in Moscow on behalf of these editors. In June the Soviet poet Andrei A. Voznesensky was forbidden to leave the USSR to give a planned poetry reading at Lincoln Center in New York City. In September the Soviet press reprinted a criticism of Voznesensky by the *Worker* (newspaper of the American Communist party) describing him as a tool of the U. S. Central Intelligence Agency (CIA). *Pravda,* in an October article surveying 50 years of Soviet literature, bluntly stated that the Communist party should control all writers.

Military history came under official attack in the summer of 1967 when A. M. Nekrich was expelled from the Soviet Communist party because of his 1965 book, *22 June 1941,* which blamed Stalin

SIDESWIPE at sea was reported by the U. S. destroyer *Walker* (at left of photo) in the Sea of Japan, May 10. A Soviet destroyer passed so close as to bump and cause minor damage. Members of Soviet crew are seen at right of this photograph made by a U. S. Navy cameraman.

OFFICIAL U. S. NAVY PHOTO

for underarming the Red Army on the eve of the war with Germany and for failing to foresee the German invasion of the USSR. (See also SOVIET LITERATURE.)

Religion. During 1967 most religious congregations in the USSR worshiped without persecution and appeared to be tolerated by the Brezhnev-Kosygin regime. Both the Orthodox and Baptist churches were permitted to publish Bibles, prayer books, hymnals, and religious calendars. The Soviet state itself was circulating a 1966 book of Bible stories, intended primarily as historical literature for children.

As before, religious toleration did not extend to the Soviet Jews. At the close of 1966, Premier Kosygin stated in Paris that Jews could emigrate from the USSR if they had close relatives abroad. But in 1967, when many Soviet Jews requested permission to emigrate, local USSR officials refused to grant exit visas.

Even before the Israeli-Arab War in June 1967, the Soviet press was publishing many anti-Jewish, anti-Zionist, and anti-Israel articles. There were also some well-publicized trials of Jews for alleged profiteering and espionage. After the June war, the Soviet press campaign against Israel became vicious, comparing the Israeli army with the German Wehrmacht of World War II. Discrimination against Soviet Jews by Soviet authorities then increased.

FOREIGN AFFAIRS

The Soviet Union's Arab allies were severly defeated by Israel in the brief Middle East war, but the Brezhnev-Kosygin regime, apparently determined to retain its influence in this area, immediately proceeded to rebuild Arab defenses. Relations with Communist China generally worsened in 1967. Soviet anti-American propaganda was at its most vituperative level, particularly over the Vietnam war, but there were some signs of U. S.-USSR cooperation, notably in the Middle East situation.

Middle East. In late May, before the war began, the USSR warned Egypt not to attack Israel. When Israel attacked first and began winning, the USSR on June 9 hurriedly convened a conference in Moscow of representatives from Bulgaria, Czechoslovakia, Hungary, Poland, Rumania, and Yugoslavia. With the exception of Rumania, which refused to cooperate, all the conferring Communist governments pledged military aid to the Arab countries, severed diplomatic relations with Israel, and threatened it with economic sanctions. In late June, after the Israeli victory, USSR President Nikolai V. Podgorny visited Syria and Egypt, promising further shipments of Soviet arms to replace war losses. Meanwhile, the Yugoslav press claimed that Israel's defeat of Syria, Jordan, and Egypt had made worthless the previous USSR influence over Arab nations.

Upon Soviet request, the UN General Assembly met in an emergency session, beginning June 17, to discuss Arab-Israeli hostility. The USSR, represented by Premier Kosygin, failed to induce the Assembly to condemn Israel as an aggressor, to make Israel pay war reparations, or to require Israeli troops to withdraw from captured Arab territories.

Meanwhile, on July 11–12, the USSR convened a conference of Bulgaria, Czechoslovakia, East Germany, Poland, Hungary, and Yugoslavia in Budapest, and the participating governments pledged economic aid to the Arab nations. Rumania was invited, but refused to attend. During July and August, the USSR shipped about $150 million worth of armaments to Egypt to replace war losses.

By November the USSR appeared reconciled to the Israeli victory, and supported a UN Security Council resolution offering UN mediation of Israeli-Arab disputes. (See also MIDDLE EAST.)

Communist China. Soviet-Chinese relations remained tense in 1967. In January about 70 Chinese Communist students en route home from Europe shouted anti-Soviet slogans in Moscow's Red Square and tried to place a wreath on Stalin's grave alongside the Kremlin wall. Soviet police and civilians fought the Chinese, injuring 30. A retaliatory demonstration occurred immediately in Peking, where Chinese Red Guards besieged the Soviet embassy and burned effigies of Soviet leaders on the embassy gate. At the end of January, Soviet embassy staff members beat up Chinese students demonstrating against the embassy in Iraq.

In February the Chinese embassy in Moscow displayed pictures of the January fight between Chinese students and Soviet citizens in Red Square. About 170 Soviet police in plain clothes destroyed the pictures, thereby becoming involved in a fistfight with the Chinese embassy staff. In retaliation, Chinese mobs came near lynching several Soviet officials returning to the USSR from North Vietnam via China. The USSR then sent home the wives and children of Soviet embassy personnel in Peking. (These dependents were harassed by Chinese Red Guards as they were enplaning at Peking airport.) Meanwhile, angry Soviet students broke into the Chinese embassy in Moscow, but retreated under Russian orders to keep calm. In March two Soviet embassy officers in Peking were expelled from China for allegedly persecuting the embassy's Chinese employees, and in return the USSR expelled two officers of the Chinese embassy in Moscow for anti-Soviet activity.

During the summer Soviet sailors were repeatedly harassed by Chinese Red Guards in Manchurian seaports. However, when the USSR threatened to suspend all trade with China, the harassment ceased. Later in the year the mutual Soviet-Chinese brutality seemed to have abated, but it had aggravated an already serious breach.

Europe. Soviet relations with western Europe were mild and moderate during 1967. In January, USSR President Podgorny was given an audience with Pope Paul VI, the first meeting between a top Soviet official and a pope. While in Italy, Podgorny negotiated a new Soviet-Italian consular pact. In February, USSR Premier Kosygin visited London where he and Prime Minister Harold Wilson arranged for a "hot line" radiotelegraph communication between their capitals.

In the fall of 1967, when Greece and Turkey almost went to war over Cyprus, the USSR supported mediation of the dispute by the United Nations. During the year, Turkey and the Soviet Union concluded treaties regulating their mutual frontier, granting more Soviet technical aid to Turkey, and establishing direct air travel between the two nations.

Cementing satellite alliances, the USSR in May concluded a new military pact with Bulgaria and in September renewed its alliance with Hungary. (See also EUROPE.)

United States. Probably because of mutual fear of Communist China, relations between the USSR and United States improved during 1967, although the two governments displayed mutual distrust. In January, Llewellyn E. Thompson, U. S. ambassador to the USSR during the Khrushchev era, was reappointed to that post.

On January 27, representatives of the United States, Britain, the Soviet Union, and numerous other countries signed a UN-sponsored treaty banning the use of outer space for military purposes. The treaty was officially ratified by the Soviet Union on May 19.

A major step toward disarmament was taken on August 24, when Soviet and U. S. representatives to the 18-nation UN Disarmament Committee in Geneva submitted identical drafts of a long-awaited nuclear nonproliferation treaty. Only the section on international controls was omitted, and this was completed on Jan. 18, 1968. (See also UNITED NATIONS.)

In June the USSR protested against U. S. air bombings of Soviet merchant ships in North Vietnamese seaports. In the autumn the USSR negotiated a new aid pact with North Vietnam, continuing Soviet shipments of military and economic supplies at an estimated rate of $500 million per year.

When the Israeli-Arab war began in June, the United States and USSR agreed not to intervene militarily. As passions mounted during the crisis, Soviet soldiers and police prevented Arab, North Vietnamese, and Cuban students from demonstrating against the U. S. embassy in Moscow. While in the United States to address the United Nations, Kosygin met with President Johnson on June 23 and 25 at Glassboro, N. J. The Middle East situation, the Vietnam War, and other world problems were cordially discussed at the summit meeting, but little common ground was found.

During the summer of 1967 the USSR postponed a planned tour of the United States by a group of 200 Soviet dancers and vaudeville players. In August, 60 Soviet scholars refused to attend the 27th International Congress of Orientalists at Ann Arbor, Mich., allegedly because of U. S. involvement in Vietnam and support of Israel.

In November, however, the United States and the USSR concluded an agreement limiting Soviet fishing off the New York and New Jersey coasts.

Cuba. Despite receiving $1 million worth of Soviet economic aid each day, Cuban Premier Fidel Castro offended the USSR by not attending the 50th anniversary celebrations in November. He sent no personal message of congratulation, and his low-level delegation in Moscow made no attempt to be courteous. Apparently the antagonism between Castro and the Kremlin concerned revolutionary tactics in Latin America. Cuba prefers guerrilla revolution, while Moscow favors Communist infiltration of Latin American governments via united fronts with labor unions, student organizations, and intellectual groups.

ELLSWORTH RAYMOND
New York University

UNIONS, Labor. See LABOR.

UPI

SVETLANA IOSIFOVNA ALLILUYEVA (STALINA), daughter of the late Soviet dictator Joseph Stalin, presented herself at the U. S. embassy in New Delhi, India, on March 6, 1967, and requested asylum to "seek the self-expression that has been denied me for so long in Russia." At a news conference in New York City on April 26, she traced her own spiritual development from an orthodox Communist position to that of a religious person with a firm belief that "humanity should be one." Her memoirs, *Twenty Letters to a Friend*, were published in the United States in October 1967.

Svetlana Stalina was born in 1925 to Stalin and his second wife, Nadezhda Alliluyeva, who died a suicide in 1932. She studied at Moscow State University, where she later taught. Her first two marriages, to Grigori Morozov and to Yuri Zhdanov, ended in divorce. In 1964 she married an Indian Communist, Brajesh Singh, who died in October 1966. She went to India with the ashes of her husband in December 1966.

PARIS MATCH

CONTRASTING MOODS among Egyptians are dramatized in these photos. (*Left*) Before the June war, crowds demonstrate in a Cairo street, pledging death to Israel. (*Below*) Following the UAR's crushing defeat, a young Arab disconsolately holds a portrait of President Nasser.

PARIS MATCH

UNITED ARAB REPUBLIC

The year 1967 was a disastrous one for the United Arab Republic (Egypt). The UAR fought and lost its third war with Israel; a large part of its territory was occupied by Israeli troops; and the Suez Canal was blocked. In Yemen, the Egyptians were forced to withdraw their forces. Domestically, the economy was in ruins, and although President Gamal Abdel Nasser clung to power, the future was highly uncertain.

The War With Israel. Egypt had fought wars with Israel in 1948 and in 1956. After 1956, UN troops were stationed in the Gaza Strip and in several places in Sinai to preserve the peace. During the past decade strong words and threats were exchanged with the Israelis. Aspiring to ultimate leadership in the Arab world, Nasser increasingly found it necessary to promise the destruction of Israel and the liberation of Palestine.

Finally on May 18, 1967, taunted by the Syrians and Jordanians, Nasser demanded that the UN Emergency Force (UNEF) be withdrawn. Whatever Nasser's motives and expectations, UN Secretary-General U Thant acquiesced immediately, and UAR troops occupied the UNEF positions. An Israeli-Egyptian confrontation was imminent. On May 22, Cairo announced that it was blockading the Gulf of Aqaba to Israeli shipping. It was this act that the Israelis interpreted as a de facto declaration of war.

The situation rapidly got out of control. On June 5, Israeli forces struck the Egyptians in Sinai. Swift air blows at Egyptian air bases established Israeli air cover, and equally swift armored columns struck across Sinai in much the same way they had in 1956. The result was a brilliant victory for Israeli arms.

By June 10, when a cease-fire was effected, a good part of the equipment of the Egyptian forces—perhaps 400 planes and 700 tanks—had been destroyed or captured (including missiles and their sites). Perhaps as many as 10,000–15,000 Egyptian soldiers had been killed (or were missing); the exact figures are uncertain.

By summer's end the Israelis held some 5,000 prisoners of war: officers, noncommissioned officers, and specialists. Military observers estimated that it would take at least two years to rebuild the shattered Egyptian forces, regardless of the degree of Soviet assistance in replacing military equipment.

The Suez Canal was once again closed, with Israeli troops ensconced along its eastern side. Despite the cease-fire arranged by the United Nations,

PARIS MATCH

ARAB SOLDIER, left behind in the rout of UAR forces in the June war, receives water from his Israeli captors. At summer's end, thousands of Arabs were still prisoners.

incidents occurred during the remainder of the year. On July 11 the Israeli destroyer *Elath* sank two Egyptian torpedo boats near the entrance to the Suez Canal. On October 21 the same destroyer was sunk by Egyptian missiles, and the Israelis retaliated on October 24 by destroying the oil refineries (which supplied 80% of Egyptian oil requirements) at Suez city.

In August, President Tito of Yugoslavia visited Egypt in an attempt to find a peace formula for the area. The attempt failed. As late as November 23, Nasser delivered a belligerent speech against Israel. Israel, on the other hand, continued to occupy the Gaza Strip and the Sinai Peninsula.

Foreign Relations. In the late winter and early spring of 1967, Egypt continued its struggle for leadership in the Arab world. Just prior to the outbreak of war in June, Nasser concluded various military and other agreements with neighboring Arab states in order to strengthen his position with regard to Israel. The most important of these was a defense pact concluded with King Hussein of Jordan on May 30.

The period marked the apogee of Arab unity. During the war attempts were made to persuade

UAR • Information Highlights

EUROPE
ASIA
AFRICA

Area: 386,100 square miles (1,000,000 sq km).
Population: 30,147,000 (July 1, 1966 est.).
Chief Cities (1966 census): Cairo, the capital, 4,196,998; Alexandria 1,800,951; Giza (1963 est.), 285,700.
Government: *President and Premier*—Gamal Abdel Nasser (took office as president for new 6-year term, March 25, 1965; took office as premier June 19, 1967). *Parliament*—National Assembly, 350 members.
Religious Faiths: Muslims, 93% of population; Christians, 6%; others, 1%.
Education: *Literacy rate* (1960), 26% of population aged 15 and over. *Total school enrollment* (1964)—4,325,182 (primary, 3,334,738; secondary, 667,854; teacher-training, 41,259; technical, 136,835; higher, 144,496).
Finance (1966 est.): *Revenues,* $1,439,000,000; *expenditures,* $1,978,000,000; *public debt* (1964), $1,585,000,000; *monetary unit,* Egyptian pound (0.4348 pound equals U. S.$1).
Gross Domestic Product (1964): $4,717,300,000.
Economic Indexes (1965): *Industrial production,* 344 (1958=100); *agricultural production,* 144 (1956–57=100); *cost of living* (1966), 128 (1958=100).
Manufacturing (metric tons, 1965): Residual fuel oil, 4,690,673; cement (1966), 2,628,000; gasoline, 855,070; sugar, 351,000; meat (1964), 249,000; crude steel, 165,000; cotton yarn (1966), 147,840; beer, 24,100.
Crops (metric tons, 1966–67 crop year): Dates, 400,000 (ranks 1st among world producers); maize, 2,200,000; rice, 2,000,000; wheat, 1,620,000.
Minerals (metric tons, 1965): Limestone, 8,297,000; crude petroleum (1966), 6,264,000; phosphate rock, 593,699.
Foreign Trade (1966): *Exports,* $605,000,000 (chief export: cotton, $329,820,000); *imports,* $1,070,000,000 (chief imports, 1965: wheat and other grain, unmilled, $89,800,000; nonelectrical machinery, $86,600,000). *Chief trading partners* (1965): USSR (took 22% of exports, supplied 9% of imports); U. S. (took 2% of exports, supplied 20% of imports).
Transportation: *Roads* (1964), 26,627 miles (42,851 km); *motor vehicles* (1965), 126,261 (automobiles, 96,586); *railways* (1964), 2,945 miles (4,739 km); *merchant vessels* (1966), 43 (192,000 gross registered tons); *national airline,* United Arab Airlines; *principal airports,* Alexandria, Cairo, Luxor, Matruh.
Communications (1967): *Telephones* (est.), 335,000; *television stations,* 19; *television sets,* 475,000; *radios* (1965), 1,613,000; *newspapers* (1963), 9.

UPI

GAMAL ABDEL NASSER, president of the United Arab Republic, expanded his own political authority in June 1967. Following defeat of UAR forces in the 6-day Israeli-Arab war, he assumed the additional office of premier and became head of the Arab Socialist Union. In August he crushed an attempted coup and signed an agreement with Saudi Arabia for withdrawal of troops from Yemen. Addressing the National Assembly on November 23, he declared that UAR military forces were now stronger than before the June war.

Nasser was born at Beni Mor, Asyut province, on Jan. 15, 1918. After attending a military academy in Cairo and graduating from staff college with honors, he rose through the ranks in the Egyptian Army to a lieutenant colonelcy. In 1952 he was a leader in the coup that overthrew King Faruk, and after a power struggle he became premier of the Republic of Egypt in 1954. He was unopposed when he was elected president in 1956. When Egypt and Syria united in 1958, Nasser became president of the new United Arab Republic, which retained its name after the withdrawal of Syria in 1961.

oil-producing Arab states to boycott the West, but these efforts were not completely successful and were ultimately abandoned.

The destruction of its army in Sinai forced a reevaluation of the position of the UAR in Yemen. By September the Egyptian forces had begun to withdraw, and Yemen (and its republican government) was abandoned by the UAR. The withdrawal from Yemen also lessened the possibility of a UAR takeover of Aden and the South Arabia Federation, which late in November received its independence as the People's Republic of South Yemen. Nasser's policies in southern Arabia were in ruins.

In the spring Egypt denounced the United States for its refusal to continue to supply a major part of Egyptian food needs. At the outbreak of the 6-day war in June, Americans in Egypt were subjected to humiliations and mistreatment, and during the war itself the United States was accused of providing air cover for the Israelis. Despite the rupture of diplomatic ties, not all Americans left Egypt. Oil prospectors continued their labors during the summer, and a number of American diplomats remained in touch with Egyptian authorities.

Although the Soviet Union did not intervene militarily in the Israeli-Arab war, it supported the Arab cause vociferously and energetically. It hastened to replace considerable portions of Egyptian military equipment lost during the fighting. As a consequence, Egyptian-Soviet relations remained warm. President de Gaulle proclaimed the neutrality of France at the outbreak of war. France subsequently demonstrated friendship for Egypt and other Arab states. But Egypt had lost prestige as a consequence of the war, and it no longer played the international role it had before hostilities.

Internal Affairs. The Egyptian economy was already in critical condition before the June war. By spring, Egypt had failed to make several scheduled payments to the International Monetary Fund (IMF); in May it agreed to accept stringent economic reforms in order to regain support from the IMF. The war closed the canal, and substantial revenues (about $600,000 daily) were thereby lost. The loss from tourism amounted to another $200,000 daily. By July it was estimated that the deficit for the year would be about $500 million.

On the brighter side, several of the other Arab states extended financial aid to Egypt; successful petroleum explorations were made in the western desert during the year; and the Aswan High Dam neared completion.

In the immediate aftermath of the war Nasser resigned the presidency (June 9) and indicated that he wanted to retire from public life. He was "prevailed" upon to remain, however. In doing so he named himself premier (June 19) and assumed sole charge of the Arab Socialist Union (the only political party). He quickly purged the army, including most of the top officers.

In August a plot against Nasser was reported in the army; among those arrested was Field Marshal Abdel Hakim Amer. In September it was reported that Amer had committed suicide to avoid trial, but by year-end serious reservations were expressed as to the truth of this explanation of his death. There were, in June, large-scale arrests of the few Jews in the country.

(See also MIDDLE EAST.)

CARL LEIDEN
University of Texas

UNITED CHURCH OF CANADA

Founded in 1925 by a historic union of the Congregational, Methodist, and most of the Presbyterian Churches in Canada, The United Church of Canada has grown from 600,522 members at the time of union to 1,062,006 at the end of 1966. The total number under pastoral care is about 2,600,000. In 1967 there were 2,614 pastoral charges, 5,219 local congregations, and 3,480 ordained ministers.

The United Church of Canada has an overseas missionary force of 271 trained personnel serving in 14 countries. In Canada it maintains extensive home mission enterprises, including 10 hospitals in frontier communities and a new oceangoing vessel, *Thomas Crosby V*, for serving isolated settlements.

The United Church also maintains 4 universities, several residential colleges and secondary schools, 24 homes for senior citizens, several redemptive homes, an increasing number of clinics and marriage guidance counseling centers, and 4 lay training centers.

ERNEST E. LONG
Secretary of the General Council

UNITED CHURCH OF CHRIST

The United Church of Christ was formed in 1957 through a union of the Congregational Christian Churches and the Evangelical and Reformed Church. In 1967 the church reported 2,063,481 members in 6,947 churches, organized in 40 conferences.

The United Church of Christ continued to explore with other Protestant churches opportunities for cooperation in common enterprises and for further union. In 1967, as a member of the Consultation on Church Union, the United Church of Christ participated in the drafting of *Guidelines for the Structure of the Church*, which has been sent to its local churches for study. There are nine other members of the consultation including two Presbyterian churches, four Methodist churches, the Evangelical United Brethren, the Christian Churches (Disciples of Christ), and the Episcopal Church.

As of Jan. 1, 1967, the United Church Board for World Ministries had 499 missionaries and fraternal workers in 34 countries. They were engaged in relief, rehabilitation, social service, education, and evangelistic work. The board has entered into exchanges of staff and representatives with the Board of International Missions and the United Presbyterian Church of the U. S. A.

The United Church Board for Homeland Ministries continued to sponsor experimental ministries, in addition to its regular work in Christian education, publication, church extension, and hospitals and homes for elderly persons and orphans. These ministries included job-training centers, a chaplaincy in Las Vegas, Nev., and services to night workers. The board has directed that all possible avenues of ecumenical cooperation should be explored in planning new programs for homeland ministries.

The church's national publication is *United Church Herald*. Officers are Ben M. Herbster, president; Joseph H. Evans, secretary; and Charles H. Lockyear, treasurer.

BEN MOHR HERBSTER
President, United Church of Christ

UNITED KINGDOM. See GREAT BRITAIN.

UNITED NATIONS

UNITED NATIONS

The 22d year of the United Nations was both busy and frustrating. Violence or the threat of violence seemed to be more pervasive than ever in relationships between states. Tension and war between Israel and the Arab states, and tension and violence between factions in Cyprus, were major preoccupations of the organization in 1967. While disagreement among the major powers prevented the organization from dealing directly with the war in Vietnam, the influence of this situation was ever present and had a direct bearing on UN ability to deal with most other problems. Considerable activity also was focused on the long-standing problems of South Africa, South West Africa, and Rhodesia—problems that appeared to have a potential for violence on racial lines with worldwide implications.

The Middle East crisis was a shock but not a surprise. Before the war the United Nations struggled to prevent violence; after hostilities began in June, efforts were directed to arranging a cease-fire. Once the cease-fire was achieved, the United Nations strove to maintain the truce and, fruitlessly, to bring about negotiations to stabilize the situation. In Cyprus the maintenance of the UN peace force itself was a problem, and the outbreak of violence late in the year showed how fragile were the UN efforts to try to keep the peace on the island without making progress toward a more permanent solution.

The sudden withdrawal of the UN Emergency Force in the Middle East and the problems of maintaining the UN force in Cyprus both illustrated the fact that the UN concept of peace-keeping—based upon voluntary principles and dependent upon the willingness of host and contributing states—had severe shortcomings. The special committee on peace-keeping was unable to evolve any permanent agreement on this device to maintain peace.

In white-ruled Rhodesia the effect of the sanctions resolution of December 1966 seemed to be minimal, and the General Assembly deplored this failure. The General Assembly in special session created a United Nations Council to assume control over the South African-governed territory of South West Africa, but none of the major powers was willing to support measures that might lead to implementation of UN control. South Africa remained intransigent, and the failure of the UN members to exert pressure on its government by economic disengagement meant that all UN efforts to alter events in that country were likely to be fruitless.

Numerous resolutions were passed aiming at disarmament, weapons control, and peaceful uses of atomic energy.

Efforts were made during the year to speed up and deal in a more concerted manner with the economic and social gap between developed and developing states. The UN Development Program made considerable progress in effectiveness of operation, as evidenced in the confident support of states that voluntarily pledged nearly $1.8 billion for its activities. Despite this success, the initial workings on the UN Industrial Development Organization, and the continuing major efforts of the permanent machinery of the UN Conference on Trade and Development, the developmental gap was widening. As Secretary-General U Thant noted in the introduction to his annual report, "We are not winning the war on want."

In the humanitarian area the UN continued to operate the Office of the High Commissioner of Refugees. A protocol to the 1951 Convention on Refugees was adopted, which, when ratified, will extend the protective efforts of that office to refugees

IN THE GENERAL ASSEMBLY the major issue of 1967 was the Israeli-Arab war. Mohamed Awad El Kony (*left inset*) of the United Arab Republic and Abba Eban (*right inset*) of Israel were the principal opposing spokesmen in the debate.

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who have come into being since 1951. Other highlights of the year included adoption by the General Assembly of the Declaration on the Elimination of Discrimination against Women; the Declaration on Territorial Asylum; and an agreement on the rescue of astronauts and the return of astronauts and objects launched into space.

The membership of the United Nations increased from 122 to 123 on December 14, when the People's Republic of South Yemen (formerly the British-administered territories of Aden and South Arabia) was admitted.

The principal activities of the United Nations in its 22d year are discussed under the following headings: (1) General Assembly; (2) Security Council; (3) Economic and Social Council; and (4) Trusteeship Council.

GENERAL ASSEMBLY

Three sessions of the General Assembly were convened at UN headquarters in New York in 1967. The 22d regular session met from September 19 to December 19. Rumanian delegate Corneliu Mănescu was elected president. A fifth special session, called at the request of the 21st regular session in 1966, met from April 21 to June 13 and considered the question of South West Africa, a review of peacekeeping operations, and the postponement of the 1967 conference on the exploration and peaceful uses of space. A fifth emergency session, called at the request of Soviet Union, dealt with the situation in the Middle East at meetings from June 17 to July 5, July 12–21, and on September 18. The major achievements of these sessions are summarized below.

Political and Security Questions—*South Africa and South West Africa*. Following its 1966 decision to terminate South Africa's League of Nations mandate over South West Africa, the Assembly on May 19 voted 85 to 2, with 30 abstentions, to establish a UN Council for South West Africa and a UN commissioner for South West Africa to administer the territory until it becomes independent. By the resolution South Africa was requested to withdraw its military and civilian personnel from the territory and to facilitate the establishment and operation of the Council. The Security Council and all states were asked to help the Council in its efforts to see that South West Africa achieves independence by June 1968.

On June 13 the Assembly elected Chile, Colombia, Guyana, India, Indonesia, Nigeria, Pakistan, Turkey, United Arab Republic, Yugoslavia, and Zambia as members of the UN Council for South West Africa, and the secretary-general appointed C. A. Stavropoulos as acting UN commissioner for South West Africa. In August the council sent a letter to South Africa requesting its implementation of the resolution. South Africa replied on September 26, rejecting the request and the role of the council.

On December 16 the regular session of the General Assembly adopted (93 to 2, with 18 absentions) a resolution condemning the refusal of South Africa to comply with the earlier resolution, and requested that the Security Council take all possible measures to implement the wishes of the Assembly. All states were urged to exert economic pressure on South Africa. At the same time the Assembly condemned (110 to 2, with 1 abstention) the illegal arrest and deportation of South West Africans by the South African government.

On December 13 the Assembly adopted (89 to 2, with 12 abstentions) another resolution condemn-

CORNELIU MANESCU, foreign minister of Rumania, was elected president of the UN General Assembly at the opening of its 22d session on Sept. 19, 1967. He is the first representative of a Communist nation to hold this position. On taking office he declared that Rumanian foreign policy aimed at cooperation "with all countries of whatever regime or philosophy." He listed the Middle East and Vietnam conflicts, aid to developing nations, and the question of disarmament as the most pressing problems confronting the United Nations. Earlier, on Jan. 31, 1967, he had negotiated an agreement leading to the establishment of diplomatic relations between Rumania and West Germany.

Manescu was born in Ploesti on Feb. 8, 1916, the son of a government clerk. He joined the Rumanian Workers party in 1936 and was active in the Democratic Students' Front at the University of Bucharest, which awarded him degrees in law and economics in 1940. He served in the ministry of armed forces from 1948 to 1955 and was deputy chairman of the state planning committee from 1955 to 1960. He became foreign minister in March 1961.

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UN FLAG comes down in Gaza, May 19, after the UAR demanded that the UN force leave the UAR-Israel border.

ing South Africa for its apartheid policies, which the Assembly felt constituted a grave danger to peace. It also urged all states to attempt pressure to get South Africa to change its policies. The resolution also condemned states that continue to be major trading partners of South Africa, and urged the Security Council to consider effective measures.

Peace-Keeping. On May 23 (by a vote of 90 to 1, with 11 abstentions) the Assembly's special session asked the Special Committee on Peace-Keeping Operations to continue its efforts to review the whole question of UN peace-keeping operations and to propose ways of continuing these operations. Another plea of a similar nature was made in a resolution adopted (96 to 1, with 5 abstentions) on December 13.

Member states were urged to make voluntary contributions to the UN so that the organization could finance peace-keeping operations. In the time intervening between the two resolutions, efforts of the Special Committee to break the deadlock between the major powers on the future of peace-keeping operations were fruitless.

Middle East. On June 13, after the outbreak of the Israeli-Arab war, the Soviet Union requested an emergency session of the General Assembly to deal with the "defiance" by Israel of the demands of the Security Council for a cease-fire. The Soviet Union asked for a decision of the Assembly designed to "bring about a liquidation of the consequences of aggression" and a withdrawal of Israeli forces from Arab lands they had occupied.

The Assembly's fifth emergency session convened on June 17. On July 4 it passed two resolutions: one (adopted 116 to 0, with 2 abstentions) called for further assistance to civilians affected by, and prisoners of war resulting from, the hostilities; the other (adopted 99 to 0, with 20 abstentions) called upon Israel to desist from all measures aimed at changing the status of the city of Jerusalem. On July 14 (by a vote of 99 to 0, with 18 abstentions) the Assembly deplored Israel's failure to implement its resolution on Jerusalem and again repeated the request.

On July 21 the Assembly referred its records and discussions on the situation in the Middle East to the Security Council, and on September 18 it concluded the fifth emergency session referring the whole matter to the 22d regular session. Because the issue continued to be primarily under the jurisdiction of the Security Council, the 22d session did not formally debate the Middle East situation. Informal negotiations continued, but with little success. (See also below, *Security Council.*)

The China Issue. In a series of decisions on November 28, the regular session of the Assembly again refused to consider a change in Chinese representation. By a vote of 69 to 48, with 4 abstentions, the Assembly reaffirmed its previous decisions that the matter of Chinese representation was an "important question" requiring a two-thirds majority to pass. Then by a vote of 58 against to 45 for, with 17 abstentions, the Assembly rejected a draft resolution that would have ousted Nationalist China and seated the People's Republic of China (Communist China). It also rejected (32 to 57, with 30 abstentions) a proposal to establish a committee to study the question.

Korea. On November 16 the Assembly (by a vote of 68 to 23, with 28 abstentions) urged the UN Commission for the Unification and Rehabilitation of Korea to continue its efforts.

Weapons Control and Space. On May 23 the special session of the Assembly voted to postpone the proposed UN Conference on the Exploration and Peaceful Uses of Outer Space from September 1967 to August 1968. The regular session, on November 3, urged all states to attend the conference.

On December 5 all states were urged (82 to 0, with 28 abstentions) to sign and ratify the Treaty for the Prohibition of Nuclear Weapons in Latin America. On December 8 the Assembly resolved (77 to 0, with 29 abstentions) to continue efforts to conclude a convention on the prohibition of the use of nuclear weapons. On December 13 it was decided (86 to 0, with 4 abstentions) to begin preparation for a fourth international conference on peaceful uses of atomic energy, to be held in 1970 or 1971. On December 18 the Assembly created an ad hoc committee to explore the possibility of reserving the ocean floor for peaceful purposes and to suggest means for international cooperation in this area.

In a resolution adopted (103 to 1, with 7 abstentions) on December 19, member states were urged to adhere to the treaty banning nuclear weapon tests in the atmosphere if they had not done so, and all nuclear states were urged to suspend all testing, including underground.

On the same day the Assembly decided (112 to 1, with 4 abstentions) to resume the 22d session in March 1968 to consider a report from the 18-nation UN Disarmament Committee at Geneva on the nonproliferation of nuclear weapons. It also decided (110 to 0, with 8 abstentions) to convene the Conference of Non-Nuclear-Weapon States to discuss the nonproliferation of nuclear weapons in

August 1968 in Geneva. This was especially timely because the United States and the Soviet Union had reached substantial agreement on a nonproliferation treaty and had presented a partial draft to the Disarmament Committee on August 24. (Agreement on the full text, including provisions for inspections and controls, was reached on Jan. 18, 1968.)

Also on Dec. 19, 1967, the Assembly adopted (115 to 0) an agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space.

In 1966 the Assembly had requested the secretary-general to prepare a concise report on the effects of the possible use of nuclear weapons, and on the security and economic implications for states of the acquisition and further development of these weapons. The report, prepared by experts from 12 countries, was submitted on Oct. 10, 1967. Among its conclusions were the following: (1) that nuclear weapons in the current arsenals have greater destructive power than all the conventional weapons since the invention of gunpowder, and that their use not only would kill millions but would produce genetic effects that could be felt for generations; (2) other than the present five nuclear powers, only six states appear to have the necessary capital resources to develop a high-quality nuclear force; (3) the more time elapses, the more nuclear arsenals grow, and the more difficult it becomes to obtain a nonproliferation agreement.

On December 19 the Assembly voted to urge the widest possible dissemination of this report. At the same time the 18-nation Disarmament Committee was asked to pursue disarmament in conventional as well as nuclear weapons.

Economic and Financial Questions. Resolutions were passed in the regular 22d session on the role of the United Nations in dealing with the following problems: training national technical personnel for the accelerated industrialization of the developing countries; the flow of external resources to the developing countries; replenishing the resources of the International Development Association; the outflow of capital from developing countries; operational activities for development; the program of technical assistance in industrial development; food production and multilateral food aid; increasing the production and use of edible protein; and the outflow of trained personnel from developing countries.

On December 8 the Assembly reviewed the World Food Program and established a $200 million target for voluntary contributions for 1969 and 1970. On December 13 the Assembly urged members to intensify efforts to achieve the goals of the 1960's Development Decade and to consider creating a second Development Decade in the 1970's. Recognizing the importance of education in development, the Assembly declared 1970 as International Education Year. On December 15 the Assembly decided (75 to 3, with abstentions) to provisionally place the administration of the UN Capital Development Fund under the UN Development Program. At the Capital Development Fund's first pledging conference, on October 31, 22 states had pledged $1.3 million.

UN Development Program. At the third session of the Development Program's Governing Council, held in New York on January 10–27, 70 new major preinvestment projects for developing countries and territories were approved, entailing costs of $186 million, of which the cooperating governments will provide $107 million. At the fourth session of the council, in Geneva, June 6–22, 54 major new preinvestment projects in 47 countries were approved at a total cost of $129.7 million with $80.7 million being contributed by the cooperating governments. At the second pledging conference for the UN Development Program, in New York, October 9, 111 states pledged $186.7 million for 1968.

UN Conference on Trade and Development. The permanent machinery of the Conference on Trade and Development continued to develop and consolidate its activities. Advances were made through its various committee in identifying and examining the major problems facing the world trading community in the fields of commodities, manufactures, financing, invisibles, and shipping. But the secretary-general reported to the Assembly in September that "progress made toward the fulfillment of the aims and objectives set forth in 1964 has been alarmingly slow." The Trade and Development Board, at its fifth session in Geneva, August 15–September 9, made recommendations for the agenda of the second Conference on Trade and Development, to be held in New Delhi, India, in February-March 1968.

Social and Humanitarian Questions. A Declaration on the Elimination of Discrimination Against Women was unanimously adopted by the Assembly on November 7. By a vote of 96 to 0, with 11 abstentions, the Assembly decided to continue the Office of UN High Commissioner for Refugees for 5 years beyond Jan. 1, 1969. The role of the high commissioner was strengthened by a protocol to the 1951 Refugee Convention, which was adopted by the 21st session of the Assembly and became operative for signatory states in 1967. The protocol extended the definition of refugees—previously considered to be those who had fled their countries before 1951.

On December 18 the Assembly decided (90 to 2, with 22 abstentions) to give high priority in its

"Israel is Winning—NOW We Must DO Something!"

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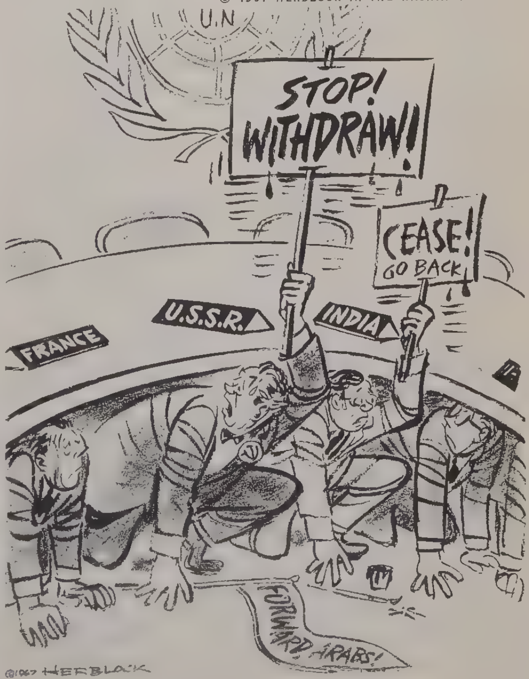
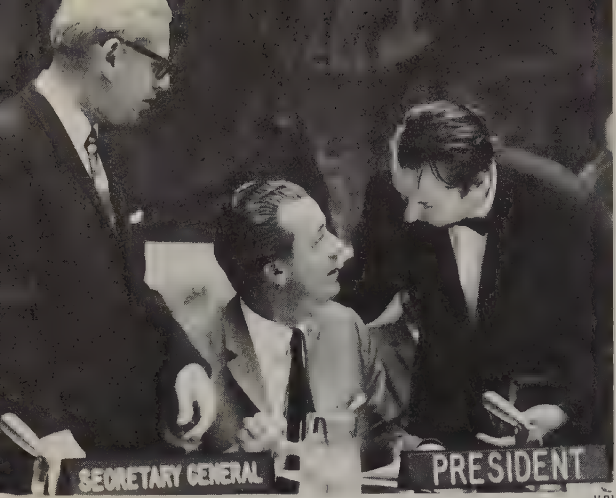




UPI

WIDE WORLD

(*Left*) IN THE SECURITY COUNCIL, U. S. Ambassador Goldberg (*left*) and Soviet Ambassador Fedorenko confer on the Middle East with Council President Hans Tabor (*seated*). (*Above*) Goldberg and Syrian Ambassador George Tomeh.

ORGANIZATION OF THE UNITED NATIONS

THE SECRETARIAT

Secretary-General: U Thant

THE GENERAL ASSEMBLY

President: Abdul Rahman Pazhwak (Afghanistan), 5th special session and 5th emergency special session; Corneliu Mănescu (Rumania), 22d session.

Afghanistan
Albania
Algeria
Argentina
Australia
Austria
Barbados
Belgium
Bolivia
Botswana
Brazil
Bulgaria
Burma
Burundi
Belorussia
Cambodia
Cameroon
Canada
Central African Republic
Ceylon
Chad
Chile
China
Colombia
Congo (Brazzaville)
Congo (Kinshasa)
Costa Rica
Cuba
Cyprus
Czechoslovakia
Dahomey
Denmark
Dominican Republic
Ecuador
El Salvador
Ethiopia
Finland
France
Gabon
Gambia
Ghana
Greece
Guatemala
Guinea
Guyana
Haiti
Honduras
Hungary
Iceland
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Ivory Coast
Jamaica
Japan
Jordan
Kenya
Kuwait
Laos
Lebanon
Lesotho
Liberia
Libya
Luxembourg
Malagasy Republic
Malawi
Malaysia
Maldive Islands
Mali
Malta
Mauritania
Mexico
Mongolia
Morocco
Nepal
Netherlands
New Zealand
Nicaragua
Niger
Nigeria
Norway
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Rumania
Rwanda
Saudi Arabia
Senegal
Sierra Leone
Singapore
Somalia
South Africa
South Yemen
Spain
Sudan
Sweden
Syria
Tanzania
Thailand
Togo
Trinidad & Tobago
Tunisia
Turkey
Uganda
Ukraine
USSR
United Arab Republic
United Kingdom
United States
Upper Volta
Uruguay
Venezuela
Yemen
Yugoslavia
Zambia

COMMITTEES

General: Composed of 25 members as follows: the General Assembly president; the 17 General Assembly vice presidents (chiefs of delegation or their deputies of Australia, China, Dahomey, Dominican Republic, Ecuador, France, Iceland, Jordan, Laos, Libya, Nepal, Nicaragua, Sudan, Tanzania, USSR, United Kingdom, and United States); and the chairman of the following 7 main committees, which are composed of representatives of all member countries:

First (Political and Security): Ismail Fahmi (UAR)

Special Political: Humberto López Villamil (Honduras)

Second (Economic and Financial): Jorge Pablo Fernandini (Peru)

Third (Social, Humanitarian and Cultural): Mrs. Mara Radić (Yugoslavia)

Fourth Trusteeship and Non-Self-Governing Territories): George J. Tomeh (Syria)

Fifth (Administrative and Budgetary): Harry L. Morris (Liberia)

Sixth (Legal): Edvard Hambro (Norway)

THE SECURITY COUNCIL

(Membership ends on December 31 of the year noted; asterisks indicate permanent membership.)

Algeria (1969)
Brazil (1968)
Canada (1968)
China*
Denmark (1968)
Ethiopia (1968)
France*
Hungary (1969)
India (1968)
Pakistan (1969)
Paraguay (1969)
Senegal (1969)
USSR*
United Kingdom*
United States*

Military Staff Committee: Chiefs of staff (or their representatives) of China, France, USSR, United Kingdom, and United States.

Disarmament Commission: Representatives of all members.

THE ECONOMIC AND SOCIAL COUNCIL

President: Milan Klusák (Czechoslovakia), 42d and 43d sessions. (Membership ends on December 31 of year noted.)

Argentina (1970)
Belgium (1969)
Bulgaria (1970)
Chad (1970)
Congo (Brazzaville) (1970)
Czechoslovakia (1968)
France (1969)
Guatemala (1969)
India (1970)
Iran (1968)
Ireland (1970)
Japan (1970)
Kuwait (1969)
Libya (1969)
Mexico (1969)
Morocco (1968)
Panama (1968)
Philippines (1968)
Sierra Leone (1969)
Sweden (1968)
Tanzania (1969)
Turkey (1969)
USSR (1968)
United Kingdom (1968)
United States (1970)
Upper Volta (1970)
Venezuela (1968)

THE TRUSTEESHIP COUNCIL

President: Miss Angie Brooks (Liberia), 34th session.

Australia[1]
China[2]
France[2]
Liberia[3]
New Zealand[1]
USSR[2]
United Kingdom[1]
United States[1]

[1] Administers trust territory. [2] Permanent member of the Security Council that does not administer a trust territory. [3] Elected for term ending Dec. 31, 1968. (Note: After Jan. 31, 1968, when Nauru becomes independent, New Zealand will cease to be a member, but the United Kingdom will continue, being a permanent member of the Security Council.)

THE INTERNATIONAL COURT OF JUSTICE

President: José Luis Bustamante y Rivero (Peru)
Vice president: Vladimir M. Koretsky (USSR)

(Judges listed in order of precedence)

Sir Gerald Fitzmaurice (UK)
Kotaro Tanaka (Japan)
Philip C. Jessup (US)
Gaetano Morelli (Italy)
Isaac Forster (Senegal)
André Gros (France)
Luis Padillo Nervo (Mexico)
Mohammed Zafrulla Khan (Pakistan)
Fouad Ammoun (Lebanon)
Cesar Bengzon (Philippines)
Sture Petren (Sweden)
Manfred Lachs (Poland)
Charles D. Onyeama (Nigeria)

SPECIALIZED AGENCIES

Food and Agricultural Organization of the United Nations; Intergovernmental Maritime Consultative Organization; International Atomic Energy Agency; International Bank for Reconstruction and Development; International Civil Aviation Organization; International Finance Corporation; International Labor Organization; International Monetary Fund; International Telecommunications Union; United Nations Educational, Scientific and Cultural Organization; Universal Postal Union; World Health Organization; World Meteorological Organization.

SOVIET PREMIER Aleksei Kosygin (*left*) with Foreign Minister Andrei Gromyko at the United Nations in June.

WIDE WORLD

next session to the completion of a draft convention exempting war crimes and crimes against humanity from the statute of limitations. At the same time all states were urged to exert every effort to make the 1968 International Human Rights Year a success, and to participate in the International Human Rights Conference in Teheran, Iran, in April-May 1968.

In addition to these matters, resolutions were passed in the 22d session of the General Assembly on the world social situation; the elimination of all forms of religious intolerance; measures to be taken against Nazism and racial intolerance; measures for the speedy implementation of international instruments against racial discrimination; efforts to create the post of a UN high commissioner for human rights; capital punishment; freedom of information; and the status of the International Covenants on Human Rights.

Decolonization Questions. The committee of Twenty-Four concerned with implementation of the 1960 Declaration on the Elimination of Colonialism, as a whole or in subcommittees, was in session for most of the year. It laid the basis for most of the Assembly resolutions on decolonization. Under prodding from the committee, the British territories of Aden and the Federation of South Arabia achieved independence in late November as the People's Republic of South Yemen.

On November 3 the Assembly deplored the continuance of the white minority regime in Rhodesia, the failure of economic sanctions to bring down the regime, and the assistance given to the regime by Portugal and South Africa. It urged Britain, as the administering authority, to take steps to end the Rhodesian regime. Portugal was condemned (82 to 7, with 21 abstentions) on November 17 for failing to implement UN resolutions urging steps toward independence for its colonies. On December 7 the Assembly strongly condemned (91 to 2, with 17 abstentions) foreign economic interests that, in effect, were impeding efforts to eliminate colonialism in the Portuguese territories and South West Africa. Steps leading to the independence of the Trust Territory of Nauru (in the Pacific) on Jan. 31, 1968, were approved unanimously on Dec. 19, 1967.

The 22d session also adopted resolutions on decolonization and self-determination for Oman, Papua and the Trust Territory of New Guinea, Fiji, Ifni and Spanish Sahara, Equatorial Guinea, French Somaliland, and U. S. and British Caribbean islands; on the questions of sovereignty of Gibraltar and the Falkland Islands; and on special educational programs for South West Africa, the Portuguese territories, and South Africans.

Administrative and Budgetary Questions. On December 19 the Assembly passed supplementary budget estimates that increased the 1967 budget from $130,314,230 to $133,084,000. A budget of $140,430,950 was adopted for 1968, and the Working Capital Fund was continued at $40,000,000. The 22d session also passed resolutions on the UN International School, the composition of the Secretariat, and the pattern of conferences.

Legal Questions. The Assembly on December 6 decided (89 to 0, with 1 abstention) to convene a United Nations Conference on the Law of Treaties in March 1968 in Vienna. On December 14 a Declaration on Territorial Asylum was unanimously adopted. Resolutions were also passed in the 22d session of the General Assembly on the work of the International Law Commission; special missions; consideration of principles of international law concerning friendly relations between states; diplomatic privileges and immunities; and the need to expedite the drafting of a definition of aggression.

SECURITY COUNCIL

The Middle East tensions and brief war and the situation in Cyprus were the chief issues of debate in the Security Council in 1967. Privately, there were intensive negotiations in March and again in September to try to see if the Council could profitably concern itself with the situation in Vietnam, but as there was no basic shift in policy by either the United States or the Soviet Union, public discussion of the question seemed fruitless and was not undertaken.

The Middle East. On January 15, Secretary-General U Thant informed the Security Council that Gen. Odd Bull of the UN Truce Supervisory Organization (UNTSO) had reported military buildups on the Syrian-Israeli border. Efforts by General Bull to convene a meeting of the Israel-Syrian Mixed Armistice Commission were unsuccessful. On April 7, after serious incidents, the two states brought charges and countercharges to the Security Council. The secretary-general reported on May 8 a further deterioration of the situation despite efforts by UNTSO to bring the parties together.

On May 16 the chief of staff of the United Arab Republic (UAR) armed forces sent a message to Gen. Indar Jit Rikhye, commander of the UN Emergency Force (UNEF) stationed in the UAR along the Israeli border, asking that the UNEF be withdrawn. On May 17–18, UAR troops forced withdrawal of the UNEF from several of its border positions, and on the afternoon of the 18th the UAR formally requested an immediate withdrawal.

Under the Assembly resolution that created the UNEF in 1956, the force was in the UAR only with the consent of that host government. The only alternative to withdrawal open to the secretary-general was to refer the matter to the UNEF Advisory Committee (composed of states with troops in the force), which in turn could refer such a question to the General Assembly. Following the UAR request, U Thant met with the Advisory Committee, but no recommendation was forthcoming. He thereupon cabled the UAR government that,

WIDE WORLD

IN CYPRUS, Irish troops in the United Nations Force patrol a coastal point during the weeks of tension between Greek and Turkish Cypriotes that began with fighting in November.

while he regretted its request, he had no alternative but to agree to the withdrawal, and it was so ordered.

On May 19 the secretary-general reported to the Council on the withdrawal of the UNEF and the serious rise in tension between Israel and its Arab neighbors. The next few days were filled with rumors of troop buildups and on May 22, U Thant flew to Cairo, learning en route that the UAR had announced a blockade of the Strait of Tiran, denying Israeli ships access to the port of Aqaba. While the secretary-general was in Cairo, Canada and Denmark requested an urgent meeting of the Security Council to consider the threatening situation in the Middle East, and meetings were held on May 24. Following U Thant's return and his report on increasing tensions, the Security Council held four meetings between May 29 and June 3, but failed to agree on recommending any course of action.

On June 5 hostilities broke out between Israel and Jordan, Syria, and the UAR. In two extended meetings on June 5 and 6 the Council discussed the situation and finally agreed unanimously on a resolution calling for a cease-fire. The Council unanimously adopted another cease-fire resolution on June 7 and a resolution asking the secretary-general and UNTSO to facilitate compliance with the truce. Hostilities ceased along the UAR and Jordanian borders with Israel, but continued along the Syrian border.

On June 9, after a prolonged debate on who was responsible for the continuing military action, the Council again unanimously adopted a resolution demanding an immediate cease-fire. Before the day was over, it received word from Israel and Syria that they had accepted. There were some outbreaks of violence on June 10, and the Council adopted a resolution on June 11 condemning all violations of the cease-fire.

Throughout the entire period the secretary-general kept the Council informed of the situation as he received reports from General Bull of UNTSO, which was working for the achievement and maintenance of the cease-fire lines. The Council adopted a resolution on June 14 urging humanitarian measures on behalf of prisoners of war and civilians caught in the conflict.

In the first four days of the conflict, Israeli forces had occupied the Sinai Peninsula up to the Suez Canal, and on July 8 fighting occurred along the canal. By an informal consensus on July 9, the Council authorized the secretary-general to have UNTSO establish military observers along the canal to help maintain the cease-fire line, and the secretary-general reported on July 11 that this had been accomplished. During this period the Council was able to act only when the United States and the Soviet Union agreed.

On October 24–25 the Council again considered the Middle East situation, following complaints from Israel of the sinking of one of its destroyers by the UAR, and from the UAR of the Israeli shelling of oil refineries. The Council adopted unanimously a resolution condemning violations of the cease-fire.

From November 9 to 22 the Council again met on the Middle East, following a UAR request to consider the "dangerous" situation resulting from the "persistence of Israel not to withdraw from all the territories" it had occupied during the brief war. After considerable debate the Council, on November 22, unanimously adopted a British resolution affirming that peace in the Middle East had to include, on the one hand, Israeli withdrawal of occupied territories, and on the other hand, acknowledgement of the rightful independence of every state in the area to be secure within its boundaries and free from threats of force. In addition, the resolution urged freedom of navigation of international waterways, just settlement of the refugee problem, and the establishment of demilitarized zones in the area.

The Council also requested that the secretary-general appoint a special representative to proceed to the area and promote agreement for peace in the area. On November 23, Gunnar Jarring of Sweden was appointed to this post. (See also MIDDLE EAST.)

Cyprus. On June 13 the secretary-general reported to the Security Council that there had been little progress in returning Cyprus to "normalcy," but that violence between ethnic Greek and ethnic Turkish Cypriotes had been contained by the continued presence of the UN Force in Cyprus (UNFICYP). On June 19 the Security Council unanimously adopted a resolution extending the stationing of the UNFICYP for another six months (to December 26). On November 15 fighting broke out in several places between Greek and Turkish Cypriotes, and the UNFICYP attempted to stabilize the situation.

As tensions increased, Greece and Turkey appeared to be at the brink of war over Cyprus. Cyprus requested a meeting of the Security Council, and on November 25 the Council unanimously asked all parties to "show the utmost moderation and restraint." On December 3 the secretary-general appealed to the governments of Cyprus, Greece, and Turkey to avoid precipitous action pending a permanent solution. This appeal, which followed attempts by the United States, NATO, and the UN to produce a mediated settlement, received favorable responses from all parties, and an accord was reported. After a long debate the Council on December 22 voted unanimously to extend the UNFICYP for another three months (to March 26, 1968).

Congo. After hearing complaints from the Democratic Republic of Congo that mercenaries of Belgian, French, and Spanish origin had been airdropped into its territory, the Security Council on July 10 unanimously adopted a resolution calling on all states to ensure that their territories were not used by mercenaries aiming at overthrowing the government of the Congo. On November 8 the Congo complained that Portugal was allowing mercenaries to use Portuguese Angola as a base for actions against the Congo. Without objection, the Council on November 15 adopted a resolution calling on Portugal to end this assistance to mercenaries from its territories.

ECONOMIC AND SOCIAL COUNCIL

The 42d session of the Economic and Social Council met in New York from May 8 to June 8. It adopted a series of resolutions on the development of natural resources, transport, narcotics, science and technology, and human rights. It also dealt with a number of procedural and administrative problems.

The 43d session of the Council met in Geneva from July 11 to August 4. Resolutions were adopted on the world food situation, economic planning and technical assistance, and the utilization of human resources. This session was resumed in New York, November 1–14, and a resolution was adopted concerning the promotion of private foreign investment in developing countries.

TRUSTEESHIP COUNCIL

The 34th regular session of the UN Trusteeship Council met in New York on May 29–June 30 and adopted resolutions on the political, economic, social, and educational conditions in the trust territories of New Guinea, the Pacific Islands, and Nauru.

A 13th special session of the Council met in New York on November 22–23 and recommended the termination of the Trust Agreement for Nauru when that territory (jointly administered by Australia, New Zealand, and Britain) achieved independence on Jan. 31, 1968.

THOMAS HOVET, JR.
University of Oregon

UNITED NATIONS CHILDREN'S FUND. See CHILD WELFARE.

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)

UNESCO, a specialized agency of the United Nations, with headquarters in Paris, had a membership of 122 countries at the end of 1967. Its policies are formulated by a biennial general conference of representatives from member nations and by an executive board of 30 members responsible to their respective governments. UNESCO's activities are carried out by an international secretariat, by experts in the field, and by national commissions. Director-general of the secretariat is René Maheu of France (elected Nov. 14, 1962). UNESCO's budget for 1967 and 1968 was set by the 1966 general conference at $61,500,000. The United Nations Development Program is expected to make available approximately the same amount for various educational and scientific projects in member states.

Education. In 1967 the director-general of UNESCO noted that there had been a spectacular increase in public expenditure on education over the past 15 years. Such spending had risen an average of 6.5% a year in the industrialized countries and 12.5% in the developing countries. Nevertheless, inequities of education continued to hamper economic growth in the developing countries, where an average of only 28% of the children of primary school age were in school, 20% of the secondary level, and only a little over 1% of the college level.

In 1967, UNESCO conducted 25 missions to developing countries that had requested help in reducing adult illiteracy. In addition, UNESCO administered four regional educational planning institutes for tropical Africa, South Asia, the Arab states, and Latin America, and sent experts in educational planning and school administration to 42 developing countries. UNESCO's mass pilot projects, designed to link literacy teaching with material betterment, were operating in five countries.

A meeting in Vienna of European ministers of education, convened by UNESCO in November, called for a broadening of opportunities for European young people to continue to universities.

UNESCO completed a major study on the uses of radio and television and other new media in education. The study concluded that these media have a major contribution to make to educational progress, especially in the developing countries.

Science and Technology. UNESCO's science budget for 1967–68 was $9,051,282, with an additional $26 million earmarked for technical assistance to member states and for UN Development Program projects.

Exceptionally rich fishing grounds were found off the Gulf of Guinea during the International Cooperative Investigation of the Tropical Atlantic, UNESCO announced in 1967. The expedition was organized under the auspices of UNESCO's Intergovernmental Oceanographic Commission.

Social Sciences and Culture. A report prepared by UNESCO on the effects of apartheid on education, science, culture, and information in South Africa concluded that the policy of apartheid was not only an inadmissible answer to racial and group conflict, but was itself the major source of racial and group conflict in that country.

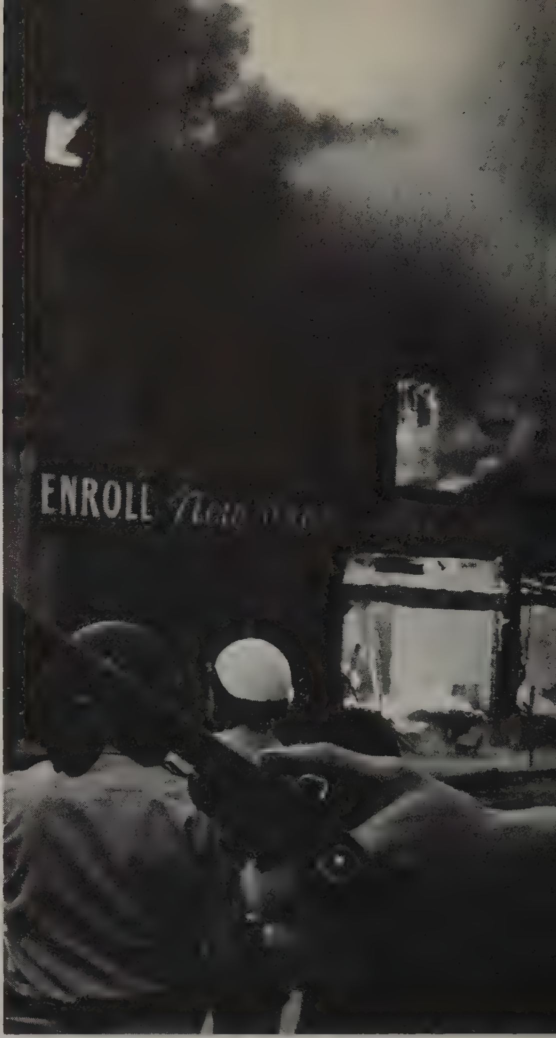
In the cultural area, UNESCO continued its work in coordinating restoration efforts in Florence and Venice, where art treasures, manuscripts, and buildings suffered from the effects of severe floods in 1966. In addition, UNESCO announced that the world-wide campaign to save the Nubian monuments in the United Arab Republic and the Sudan from the rising waters of Lake Nasser had achieved the successful dismantling of 22 temples, a complete survey of the entire area, and the reconstruction of the temples of Abu Simbel.

SALLY SWING SHELLEY
UNESCO, New York City

UNITED STATES

"This is a day of dissent and divisiveness. More and more, hostility and venom are the hallmarks of any conversation on the affairs of the nation. Today all seem caught up in mutual recriminations—Negro and white, rich and poor, conservative and liberal, hawk and dove, Democrat and Republican, labor and management, North and South, young and old. . . . Today the first duty of responsible citizens is to bind together rather than tear apart. The fissures in our society are already dangerously deep."

—John W. Gardner, Secretary of Health, Education, and Welfare, in an address at the University of North Carolina, Oct. 12, 1967.



(*Right*) A National Guardsman searching for snipers scans the buildings that remain standing on a Detroit street during the devastating riots of July 1967.

UNITED STATES

The year 1967 was a grim one in American history. An ugly war in Vietnam continued to grow larger, to defy the efforts of the peacemakers, to stimulate a bitter debate in the nation, and to generate hostility toward the United States in other countries. Rioting erupted once again in many cities during the summer and produced its own sharp debate over ways of dealing with the urban crisis. And conflict between the President and the Congress hampered efforts to come to grips with the many problems that were plaguing the nation.

Confidence in American institutions and in American leadership seemed to be in decline. Government leaders appeared to be unable to deal successfully with the many problems that faced them or to establish a scale of priorities that would permit them to concentrate their resources on the most important problems.

The economy continued to expand, but it grew slowly during the early months. The rapid growth during the remainder of the year was marred by mild inflation and fears of much greater price increases.

FOREIGN AFFAIRS

Vietnam. The Johnson administration in 1967 continued to escalate the war and to defend its actions against a rising tide of criticism. The list of bombing targets in North Vietnam was lengthened significantly, and the troop level was also increased, reaching nearly 500,000. Costs mounted, with the continuation of the war producing a supplemental appropriation of over $12 billion for fiscal 1967 and pushing the defense appropriation for the following year to $70 billion. U. S. casualties in Vietnam (including killed and wounded) since January 1961 increased rapidly to more than 100,000.

Administration spokesmen insisted that they were ready to negotiate a settlement and that the enemy was the obstacle to peace. They maintained that the bombing of North Vietnam—the object of much criticism—had to continue until the enemy scaled down its military operations. They argued that the bombing was an effective form of pressure, and that previous bombing pauses had not produced negotiations. The administration assumed that its efforts were succeeding, but it cautioned that a substantial period of fighting lay ahead.

The administration's defense of its course placed emphasis on a Communist Chinese threat to the national security. The war was not viewed as a civil war, nor were the Vietcong and North Vietnam regarded as independent. Rather, they were seen as heavily influenced by China, and the war was looked upon as a clash between efforts to expand and to

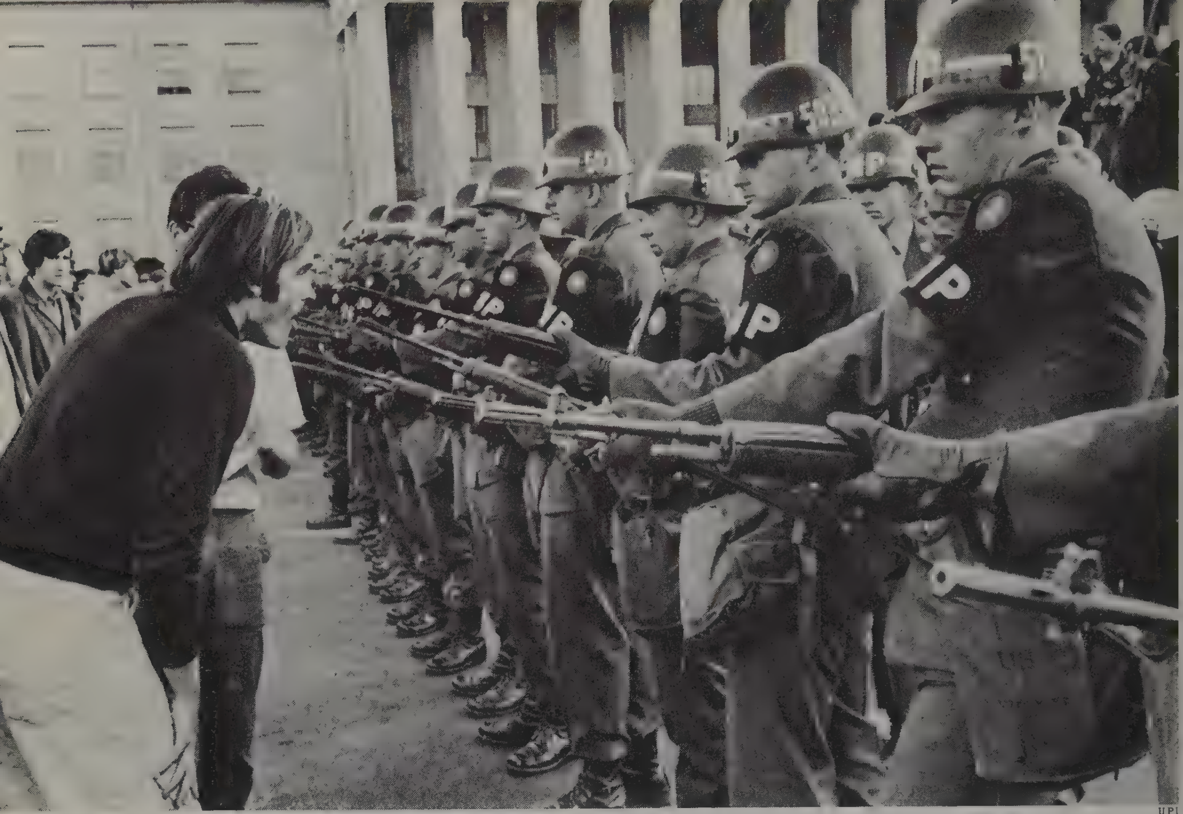
(*Continued on page 714*)

TONY SPINA, FROM THE DETROIT FREE PRESS

UNITED STATES • Information Highlights

ASIA
NORTH AMERICA

Area: 3,615,211 square miles (9,363,407 sq km).
Population: 198,765,000 (May 1, 1967, est.).
Chief Cities (1965 est.): Washington, D. C., the capital, 802,000; New York City, 8,080,000; Chicago, 3,520,000; Los Angeles, 2,695,000; Philadelphia, 2,047,000; Detroit, 1,600,000; Houston, 1,100,000.
Government: *President*—Lyndon B. Johnson; *Vice President*—Hubert H. Humphrey. *Congress*—Senate, 100 members (party seating, 1967: Democrats, 64; Republicans 36); House of Representatives, 435 members (party seating, 1967: Democrats, 247; Republicans, 187, 1 vacancy).
Religious Faiths: Protestants, 55% of population (Baptists, 19%; Methodists, 11%; Lutherans, 7%; Presbyterians, 4%; Episcopalians, 3%; others, 11%); Roman Catholics, 23%; Jews, 5%; Greek Orthodox, 3%.
Education: *Literacy rate* (1960), 98% of population aged 14 and over. *Total school enrollment* (1965–66)—56,572,685 (elementary, 33,152,243; secondary, 17,499,578; university /higher, 5,920,864).
Finance (1967 est.): *Revenues*, $154,662,000,000; *expenditures*, $160,859,000,000; *public debt*, $327,300,000,000.
Gross National Product (1966): $743,300,000,000.
National Income (1966): $616,700,000,000; average annual income per person, $3,132.
Economic Indexes: (1966): *Industrial production*, 167 (1958=100); *agricultural production* (1965), 117 (1956–57=100); *cost of living*, 112 (1958=100).
Manufacturing (metric tons, 1966): Crude steel, 146,052,000; cement, 67,164,000; meat, 14,558,400; wheat flour, 11,472,000; plastics and resins, 5,676,000; aluminum, 3,316,800.
Crops (metric tons, 1966): Corn, 104,224,000 (ranks 1st among world producers); wheat (1967), 41,996,000 (world rank, 2d); soybeans, 25,351,000 (world rank, 1st); oats, 12,129,000 (world rank, 1st); citrus fruits, 10,367,000 (world rank, 1st); tomatoes, 5,153,000 (world rank, 1st); cotton lint, 2,096,000 (world rank, 1st).
Minerals (metric tons, 1966): Coal, 492,552,000 (ranks 1st among world producers); crude petroleum, 409,164,000 (world rank, 1st); iron ore, 91,596,000 (world rank, 2d); copper, 1,296,000 (world rank, 1st); barite (1965), 767,162 (world rank, 1st); zinc, 519,600 (world rank, 2d); silver (1965), 39,806,033 troy ounces.
Foreign Trade (1966): *Exports*, $30,434,000,000 (chief exports: nonelectrical machinery, $5,779,000,000; motor vehicles and parts, $2,155,000,000; electrical apparatus, $1,899,000,000; wheat and flour, $1,536,000,000); *imports*, $25,621,000,000 (chief imports: nonelectrical machinery, $1,677,000,000; crude and partly refined petroleum, $1,229,000,000). *Chief trading partners:* Canada (took 22% of exports, supplied 24% of imports); Japan (took 8% of exports, supplied 12% of imports); Britain (took 6% of exports, supplied 7% of imports).
Transportation: *Roads* (1965), 3,689,666 miles (5,936,664 km); *motor vehicles* (1965), 90,370,182 (automobiles, 75,260,847); *railways* (1965), 212,059 miles (341,203 km); *merchant vessels* (1966), 2,278 (20,065,000 gross registered tons); *principal airports*, 9,673.
Communications (1967): *Telephones*, 98,446,000; *television stations*, 784; *television sets*, 78,200,000; *radios* (1965), 242,000,000; *newspapers* (1966), 1,754.



UPI

Military police confront war protesters outside the Pentagon during a massive peace march in Washington, October 21.

1967: YEAR OF THE WAR DEMONSTRATION

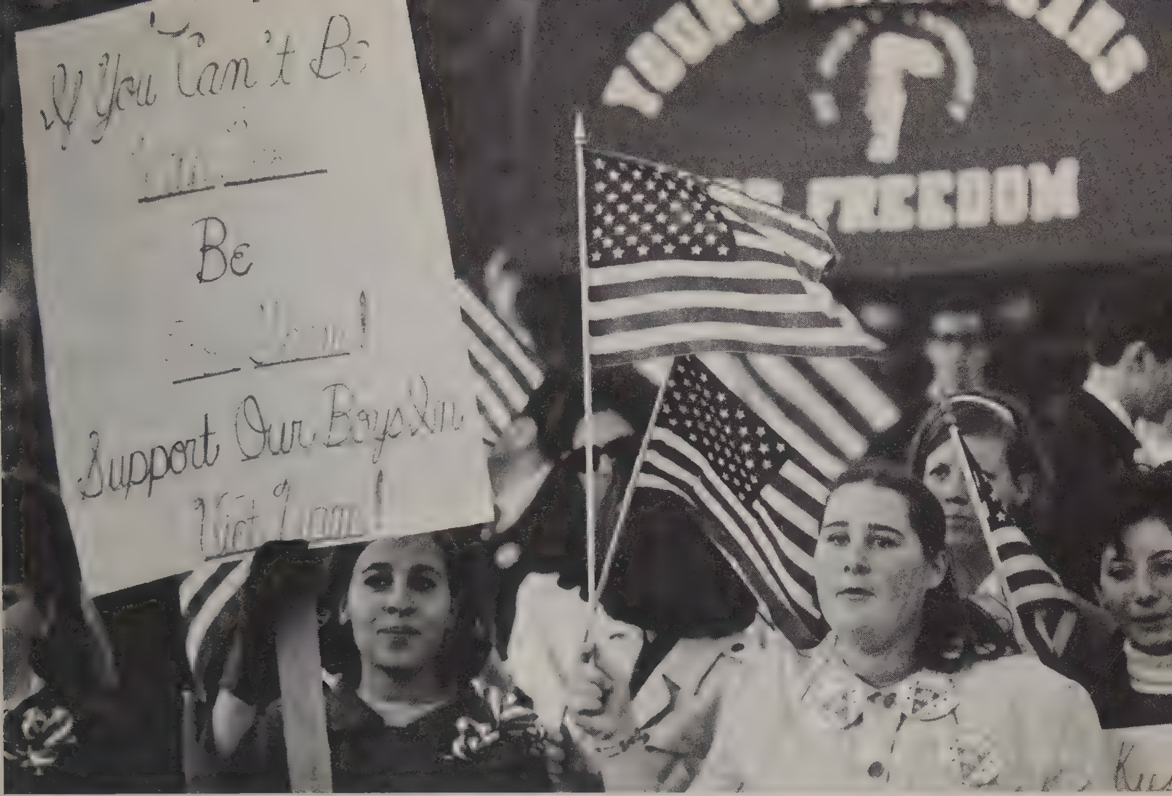
UPI

Increasing discontent with the Vietnam War, with the nature of United States involvement, and with the administration of Selective Service, made 1967 the year of the war protest. Although some demonstrations supported the government, most attention centered on anti-war marches and meetings calling for every kind of solution ranging from negotiated peace to total American withdrawal.

(*Left*) In a Boston church, young men burn their draft cards as part of a war protest in October. (*Below*) In New York City, in April, a crowd estimated at 125,000 marched and demonstrated against America's involvement in Vietnam War.

PICTORIAL PARADE

NOW!
AGAINST


If You Can't Be
Be
Support Our Boys In
Viet Nam!
FREEDOM

UPI

Supporters of U. S. policy in Vietnam held a demonstration of their own in New York City's Battery Park, in October.

UPI

UPI

(*Above*) University of Wisconsin student screams at police, who used clubs to break up an anti-war demonstration in October. (*Right*) The April peace demonstration in New York City ended with a rally in front of the UN Building.

(*Continued from page 710*)

contain Chinese influence. Should the United States fail, the administration contended, Southeast Asia would become part of a Chinese empire, and a larger, more dangerous war, involving millions of Chinese armed with nuclear weapons, would follow.

Although administration policy had defenders in Congress, it also faced growing opposition there. Several members, including Senators Jacob K. Javits, Stuart Symington, and Edward W. Brooke and Congressman M. K. Udall, switched dramatically from defense to criticism of U. S. policies in Vietnam. The most prominent defender was Everett Dirksen, the Republican leader in the Senate, while J. William Fulbright, the chairman of the Senate Foreign Relations Committee, was a leading critic. Congress also included advocates of greater military pressure, such as John Stennis and L. Mendel Rivers, both chairmen of major committees concerned with military affairs.

A significant development during the year was the rapidly expanding opposition to the war on the part of Republican members of Congress. They became as sharply divided as the Democrats. Sen. Thruston Morton became especially outspoken, charging that President Johnson had been "brainwashed" by the "military-industrial complex" in believing that the United States could achieve a military victory in Vietnam.

American public opinion on the war remained divided and continued to fluctuate. Most people endorsed the basic policies of large but limited military pressure as a means of achieving a negotiated settlement, but sizable blocs advocated either a significant reduction or a substantial increase in military pressure. Approval of Johnson's conduct of the war shifted frequently but remained well below the 50 percent mark throughout the year, and was much lower in December than it had been early in the year.

Many noted Americans joined in the vigorous public debate of the war. Some, including former President Eisenhower and Gen. Curtis LeMay, advocated increased military pressure. But other retired military men, including Generals Matthew Ridgway, James Gavin, and David Shoup, as well as other critics, raised doubts about the effectiveness of the military means being employed and called for de-escalation and negotiation. They suggested that the nation had moved beyond the limits of its power. The latter suggestion was a major theme in the arguments of the columnist Walter Lippmann and other prominent critics. Lippmann proposed a withdrawal of U. S. military forces from the Asian mainland. Like many other critics, he argued that the costly war in Vietnam was hampering efforts to tackle pressing problems at home and was damaging relations with other nations.

Radical critics escalated their means of protest. Moving beyond peaceful demonstrations, many of them resisted taxation and the draft and disrupted activities connected with the war, including recruiting on college campuses by the armed forces and defense contractors. Such tactics produced a split in the peace movement, for many liberals found them intolerable and harmful to their cause. The tactics provided ammunition for those who charged that the critics harmed the national interest and should be suppressed. In response to this charge, critics maintained that the administration was trying to stifle debate.

Prominent potential presidential candidates reflected the conflict of opinion on the war. Leading Republicans included New York Gov. Nelson Rockefeller, who generally refrained from comment on the war; former Vice President Richard Nixon and California Gov. Ronald Reagan, who advocated further escalation; Illinois Sen. Charles Percy, who called for greater use of Asian forces and warned of war with China; and Michigan Gov. George Romney, who switched from supporting to opposing the administration's policies. (Romney withdrew from the race on Feb. 28, 1968.)

On the Democratic side, former Alabama Gov. George Wallace called for greater use of military force in Vietnam and suppression of dissent at home. Senators Robert Kennedy and Eugene McCarthy pressed for de-escalation and negotiation, insisted that Johnson had changed Vietnamese policies since 1964, and argued that the nation must recognize that it possessed limited power. In November, McCarthy announced that he would contest Johnson for the 1968 presidential nomination over the war issues. (See also VIETNAM WAR.)

The Middle East and the Summit Meeting. In May, a new crisis erupted in an area of large significance for the United States. Backed by the Soviet Union and the Arab nations, Egypt secured the removal of the United Nations peace-keeping force from her territory, moved troops to the Israeli border, and closed the Gulf of Aqaba to Israeli shipping.

Washington sought a peaceful solution. Its response was influenced by several factors: commitments to Israel, fears of a great increase in Soviet influence in the Middle East, a desire to avoid war and a big-power confrontation, awareness that the large-scale military effort in Asia limited United States ability to use force elsewhere, and confidence that Israel would give diplomacy a chance to resolve the dispute. Israel, however, lost confidence in the ability of diplomacy to protect her vital interests. In early June, Israel moved effectively against its enemies, destroying much of their military force and seizing a large amount of their territory. Throughout the short war (June 5-10), Washington and Moscow sought successfully to prevent their commitments to the two sides from producing a military clash between the big powers. Their cooperation enabled the United Nations to effect a cease-fire.

With the war at an end, the United States and the Soviet Union clashed over the steps that should follow. While recognizing Israel's right to exist, the Soviet Union now advocated a Union Nations resolution branding Israel as an aggressor and demanding immediate withdrawal of its forces from the captured territory. The United States rejected this demand and insisted that withdrawal should not take place until Israel's right to exist had been guaranteed. (See also MIDDLE EAST.)

Responding to pressure from others and to their own interest in avoiding a confrontation, President Johnson and Premier Kosygin of the Soviet Union met in Glassboro, N. J., on June 23 and 25. Kosygin was in New York attending an emergency meeting of the UN General Assembly, and the site represented a compromise by the two leaders. Although the meeting was friendly and lasted longer than expected, no progress was made on the big issues: the Middle East, Vietnam, and antimissile systems. Each man held to his position and revealed the great gulf separating them.

UPI

U. S. SOLDIERS rest as best they can in the monsoon rains after repulsing an enemy sniper and mortar attack on their position in South Vietnam.

The events that followed the summit meeting demonstrated that no solution to the problems of the Middle East had been found. In defiance of U. S. hopes, the Soviet Union began once again to send arms to the Arabs. The latter charged that the United States had helped Israel and had enabled her to win the war, and they prepared for the day of revenge. Israel, on the other hand, indicated that she would not withdraw from the captured territory until other problems were solved. In the United Nations, additional efforts failed to produce a solution. The United States and the USSR continued to endorse conflicting views on the timing of Israel's withdrawal from the captured territory, and both countries maintained naval forces in the region.

Relations with the USSR. An attitude of restrained hostility governed Soviet-American relations in other areas besides the Middle East. A major factor behind this was the war in Vietnam. The USSR improved its ability to aid North Vietnam by obtaining permission to send supplies through China. It also demanded that the United States stop bombing North Vietnam and suggested that such a step would lead to negotiations. But the United States rejected proposals for an unconditional end to the bombing. The USSR, in turn, insisted that little improvement in relations between the two countries could take place while war raged in Asia.

One small sign of improvement did appear during the year. In March, the U. S. Senate ratified a controversial consular treaty between the two nations. Some progress also was made on a treaty to block the spread of nuclear weapons. Identical drafts (with an inspection provision left blank to be completed later) were presented by the two countries to the 18-nation disarmament conference in Geneva, August 24. But final agreement was hampered by controversy over the inspection clause, West German fears about the implications of the treaty for its own security and industrial progress, and American desires to maintain good relations with a major ally.

Other Developments. Tension also characterized the relations between the United States and many other nations, including the North Atlantic Treaty Organization (NATO) allies. The latter believed that the United States no longer behaved as an ally should, had become too interested in Asia and in reaching agreement with the Soviet Union, and did not pay enough attention to European interests. Growing pressure in the United States for the reduction of U. S. military forces in Europe was a contributing factor to the strains in the alliance. Frequently during the year, President Johnson and his aides met with European leaders and tried to persuade them that the United States remained committed to Europe and would consult with its European allies on all important questions. (See also EUROPE; NORTH ATLANTIC TREATY ORGANIZATION.)

In the United Nations there was much hostility toward United States actions in Vietnam. Arthur Goldberg, U. S. representative in the world organization, sought not only to initiate negotiations but to persuade others that the United States was sincerely interested in a negotiated settlement. Many UN members believed that Washington had neglected and destroyed opportunities for such a settlement, and they supported Secretary-General U Thant's suggestion that an end to American bombing was the necessary first step toward peace.

In the early fall, 50 members of the General Assembly called for an unconditional halt in the bombing (nearly twice as many as had done so a year earlier). Frequently U Thant and others warned that the war in Vietnam was likely to expand into World War III. Behind these official attitudes lay widespread and growing criticism of American behavior throughout the world. A notable exception was Australia, a strong defender of the U. S. role in Asia. (See also UNITED NATIONS.)

The U. S. foreign aid program also suffered serious setbacks during the year. Recognizing the strength of the opposition, President Johnson proposed an unusually small appropriation. It failed to satisfy the opponents, however, and they were strong enough in Congress to produce additional cuts. In the end, only $2 billion was authorized, the smallest sum in the 20-year history of the program. (See also FOREIGN AID.)

SOVIET PREMIER Kosygin (*left*) talked seriously with President Johnson at meetings in Glassboro, N. J., in June.

Congress also rejected President Johnson's request for a promise of additional funds for Latin America. He asked for this in advance of a meeting of American heads of government at Punta del Este, Uruguay, in April, hoping that the promise would help him accomplish his objective there: an agreement to develop a Latin American Common Market. (See LATIN AMERICA.) Despite the rebuff, the conferees did agree to work toward this objective.

(See also FOREIGN POLICY OF THE UNITED STATES.)

DOMESTIC AFFAIRS

Civil Rights and Civil Disorders. The year 1967 demonstrated that the civil rights movement had lost much of its momentum and that urban Negroes suffered from frustrating social and economic problems. Early in the year, President Johnson submitted a civil rights proposal that resembled the one rejected in 1966 and dealt with discrimination in housing, among other matters. Opponents of such legislation had gained strength in the 1966 elections, and they now included Northern as well as Southern congressmen. Sen. Everett Dirksen of Illinois, who had helped to pass civil rights bills in 1964 and 1965, now opposed the new measure. Congress refused to pass it.

One source of weakness was the alienation of many Northerners. Earlier, the civil rights movement had sought to promote change in the South. Now, the movement had declined there and instead was seeking to integrate Northern schools and Northern residential areas. Many white Northerners, especially in working-class neighborhoods, now felt threatened by the movement. They rallied behind such leaders as Mrs. Louise Day Hicks, a candidate for mayor of Boston, who opposed the new developments in civil rights; and they resisted efforts of such civil rights leaders as Father James Groppi of Milwaukee to obtain open-housing ordinances.

Another source of weakness was the fragmentation of the movement. Negro leaders were now battling with one another over methods and objectives. Some, such as Bayard Rustin, Rev. Martin Luther King, Jr., Roy Wilkins, and Whitney Young, continued to advocate nonviolent methods, coalitions of blacks and whites, and integration. They also proposed social and economic reforms. Others, however, most notably Stokely Carmichael and H. Rap Brown, regarded these methods as inadequate and these objectives as undesirable. Disillusioned with white America and the established political process, these leaders preached violence, black power, separation of the races, and revolution.

The war in Vietnam also divided Negro leadership. Dr. King, for example, became a very active participant in the peace movement and argued that a civil rights leader should do so because Negroes were being called upon to make disproportionately large sacrifices in the war and because the conflict was getting in the way of efforts to attack the social and economic problems that were plaguing Negroes at home. Ralph Bunche, among others, criticized King for his role in the peace movement, arguing that it hurt the civil rights movement. The former had drawn away many people who once had focused their attention on civil rights.

While Negro leaders were disagreeing with one another and Johnson was trying to persuade Congress to pass a new civil rights law, rioting erupted in the Negro ghettos for the third consecutive summer. This time, Detroit experienced the largest riot, but Newark, N. J., and other cities were not far behind. Almost 70 cities were hit by large-scale disorders. About 85 persons lost their lives, and more than 3,000 were injured. Property damage was enormous, and government units spent millions of dollars on efforts to reestablish order. The Detroit situation was so serious that Gov. George Romney was forced to ask President Johnson to send federal troops into the city. (See also DETROIT; NEW JERSEY.)

The riots triggered a major debate over their causes and cures. According to one widely held theory, the riots had been produced by agitators and conspirators, and thus investigations were conducted to find the guilty parties. The cure, according to these theorists, was effective suppression, and so the police and the National Guard were given new antiriot training.

Alternative theories stressed social and economic problems as the cause and reform as the solution. The riots suggested to many observers that the civil rights movement and the anti-poverty efforts of government agencies had not come to grips with the basic problems of lower income Negroes in the urban centers, such as unemployment, poor housing, and inadequate education. Massive long-term efforts were required to provide significant jobs, improve housing, reconstruct slums, and produce other changes. Both government and business needed to be drawn into the battle against urban problems. Although some steps were taken, Dr. King and others charged that not nearly enough was being done and that urban problems deserved more attention than the problems of Southeast Asia. In July, President Johnson appointed a special Advisory Commission on Civil Disorders, headed by Gov. Otto Kerner of Illinois, to examine all aspects of the problem and to make recommendations for dealing with the situation. Its report was released on Feb. 29, 1968.

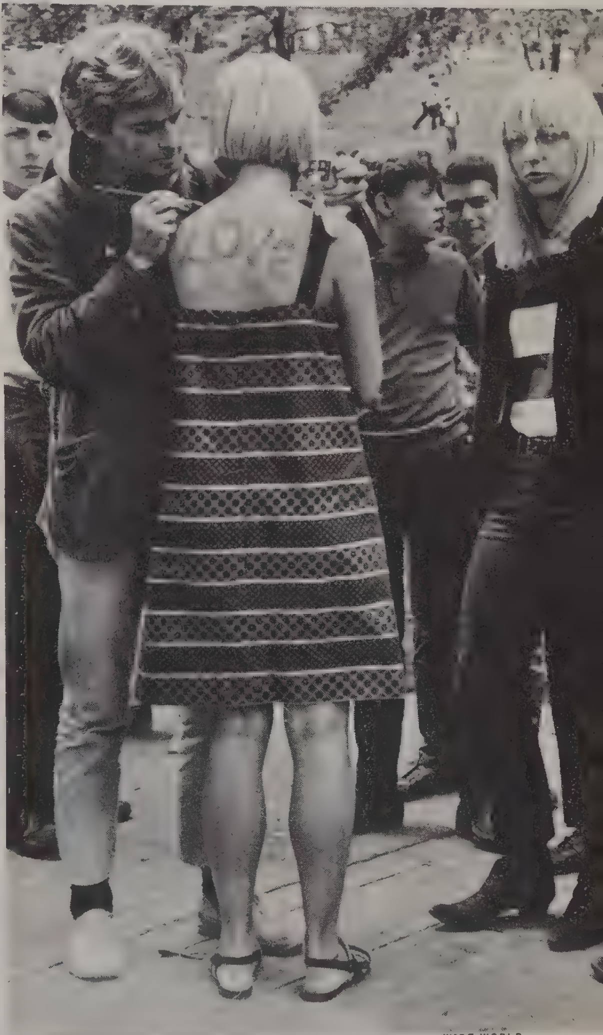
Despite many difficulties, there were signs of progress in the civil rights area. Integration continued to move forward in the South, and Southern Negroes maintained their political advance. The President appointed a Negro, Walter Washington, to the top position in the city government of Washington, D. C., and Thurgood Marshall became the first member of his race to serve on the U. S. Supreme Court. The voters of Gary, Ind., and Cleveland elected Negro mayors. In Cleveland, Carl Stokes became the first Negro mayor of one of the nation's ten

WIDE WORLD

AT SUMMER'S END, in a cold and damp September, a hippie sits disconsolately on a park bench in San Francisco.

THE HIPPIES

Among U. S. youth, the most publicized, examined, harshly denounced, and strongly defended group in 1967 were the hippies. With their colorful style and their insistence on everyone's right to live as he wishes—to do his "own thing"—they seemed for many young people to offer an attractive alternative to what were felt to be the frustrations of American society in the middle of the 1960's.



WIDE WORLD

"LOVE" is applied in body paint to the back of a girl participating in an April "love-in" at Cincinnati's Eden Park.

UPI

HIS FLOWER POWER somewhat wilted, a hippie sits-in during a December Vietnam War protest, in Oakland, Calif.

UNITED STATES CABINET MEMBERS IN 1967

(Note: A biography of Secretary of State RUSK appears under its own heading; one of Secretary of Defense McNAMARA appears within the article NATIONAL DEFENSE.)

UPI

HENRY HAMILL FOWLER, secretary of the Treasury since April 1, 1965, reported increases in the balance of payments deficit and the national debt in 1967, and supported the President's proposal for a tax increase. Fowler was born in Roanoke, Va., on Sept. 5, 1908. He graduated from Yale law school, and served as a counsel for the Tennessee Valley Authority in the 1930's. During World War II and the Korean conflict he served on federal agencies, and later as undersecretary of the Treasury (1961–64).

UPI

RAMSEY CLARK, acting attorney general from October 1966, was appointed U. S. attorney general on Feb. 28, 1967. His father, Supreme Court Justice Tom Clark, announced his retirement in June to avoid possible conflicts of interest. In 1967, the younger Clark issued rules prohibiting wiretapping by federal agencies. He was born in Dallas, Tex., on Dec. 18, 1927. A graduate of the University of Texas (1949), he served as an assistant U. S. attorney general (1961–65) and deputy attorney general (1965–66).

WIDE WORLD

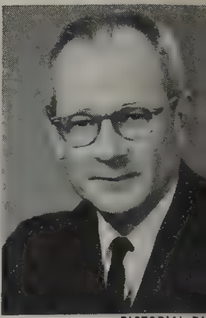
LAWRENCE FRANCIS O'BRIEN, postmaster general since Nov. 3, 1965, proposed in 1967 that the Post Office Department be replaced by a nonprofit government corporation. He was born in Springfield, Mass., on July 7, 1917, and graduated from Northeastern University (LL.B., 1942). He headed a realty firm and began in politics as an aide to Rep. Foster Furculo. Later he managed the senatorial and presidential campaigns of John F. Kennedy. O'Brien served as an aide to both Presidents Kennedy and Johnson.

JOHN MOSS, FROM BLACK STAR

STEWART LEE UDALL, secretary of the interior since Jan. 21, 1961, was backed by the U. S. Supreme Court in 1967 in his conservationist fight to prevent the building of a power dam at High Mountain Sheep on the Snake River between Idaho and Oregon. He was born in St. Johns, Ariz., on Jan. 31, 1920, and graduated from the University of Arizona (LL.B., 1948). He was a member of Congress from 1955 to 1960, when he was appointed to President Kennedy's cabinet. He has written on conservation.

UPI

ORVILLE LOTHROP FREEMAN, secretary of agriculture since Jan. 21, 1961, in 1967 backed the right of farmers to organize, and spoke out on behalf of collective bargaining powers for farmers. Born in Minneapolis on May 9, 1918, Freeman received an LL.B. from the University of Minnesota in 1946. After practicing law, he became state chairman of the Democratic-Farmer-Labor party and managed Hubert H. Humphrey's 1948 senatorial campaign. He served as governor of Minnesota from 1955 through 1960.



PICTORIAL PA

WILLIAM WILLARD WIRTZ, secretary of labor since Sept. 25, 1962, took steps in 1967 to alleviate unemployment in slum areas and to eliminate racial discrimination by federal contractors. He was born in De Kalb, Ill., on March 14, 1912, and graduated from Harvard Law School. In World War II he served as general counsel on the War Labor Board. He taught law at Northwestern University (1946–54), and later was a law partner of Adlai Stevenson. On Jan. 30, 1961, he became undersecretary of labor.

FRED WARD, FROM BLACK

JOHN WILLIAM GARDNER, secretary of health, education, and welfare since Aug. 18, 1965, concentrated civil rights enforcement powers in his own office in 1967, and took steps to enforce civil rights in federally financed welfare programs. He was born in Los Angeles on Oct. 8, 1912, and obtained a Ph.D. from the University of California in 1938. He joined the Carnegie Corporation in 1946 and served as its president from 1955 to 1965. (Gardner's resignation from the cabinet was announced on Jan. 25, 1968—effective March 1.)

ALEXANDER BUEL TROWBRIDGE, JR., succeeded John T. Connor as secretary of commerce on June 14, 1967. He was born in Englewood, N. J., on Dec. 12, 1929, and graduated from Princeton University (B. A., 1951). After working for petroleum companies in Central America he became president of Esso Standard Oil Co. of Puerto Rico. He was appointed assistant secretary of commerce in April 1965 and acting secretary of commerce in February 1967. (Trowbridge's resignation was announced on Feb. 16, 1968.)

ROBERT CLIFTON WEAVER, who on Jan. 18, 1966, became the first secretary of housing and urban development and the first Negro cabinet officer, devoted his chief efforts in 1967 to federal housing programs and urban racial unrest. Born in Washington, D. C. on Dec. 29, 1907, he studied at Harvard (Ph.D., 1934), served as adviser to federal agencies in the 1930's and 1940's on problems of minorities, and held New York state and city housing posts. Later he was with the Housing and Home Finance Agency.

WIDE W

ALAN STEPHENSON BOYD was sworn in on Jan. 10, 1967, in the newly created cabinet post of secretary of transportation. Born in Jacksonville, Fla., on July 20, 1922, he received a law degree from the University of Virginia (1948) and was an Army officer in World War II and the Korean war. After serving as chairman of the Florida Railroad and Public Utilities Commission, he was named in 1959 to the Civil Aeronautics Board. He was appointed undersecretary of commerce for transportion in 1965.

largest cities, and he achieved his victory by gaining the support of significant numbers of whites as well as a very large number of Negroes.

Both Stokes and Richard Hatcher of Gary, however, won by narrow margins although they were Democrats running in overwhelmingly Democratic cities. Voting in Gary and Cleveland and also in Boston, where Mrs. Hicks lost in a very close election, revealed the hostile feelings toward Negroes of many white Northerners.

(See also CIVIL RIGHTS; ELECTIONS.)

Congress. In Congress, the most significant development was the revival of the conservative coalition in the House of Representatives. The coalition had been hurt in the 1964 elections and had been especially ineffective in 1965, but now, as a consequence of Republican victories in 1966 which increased the Republican delegation in the House by 47, the coalition was able to function rather successfully once again.

Conservatives in both parties were dominated by the desire to abolish some domestic programs, reduce spending on others, prevent the establishment of new ones, and hold down domestic spending in order to meet the costs of the war. Their effectiveness on more than three dozen roll calls weakened President Johnson's reputation as a master of legislative tactics.

The coalition functioned despite the insistence of Gerald Ford, the House Republican leader, that members of his party would not work closely with conservative Southern Democrats. The Republican approach, he insisted, would be a positive, not a negative one. He and other Republicans tried to implement the so-called Heller plan to turn a portion of the revenue from federal taxes over to the states to use as they desired. Ford hoped to make a record that would lead to Republican victories at the polls in 1968.

Influenced by the mood of Congress as well as the pressures of the war, the President did not make large demands upon the lawmakers. He tried to maintain established domestic programs, but he did not advocate many new ones or substantial increases in expenditures. He called, for example, for only a small increase in spending on the war on poverty, although earlier the administration had planned to double expenditures in this area.

The President had his greatest difficulties in the House. Conservatives there took his request for $662 million for the model cities program and reduced it to $237 million. While he asked for $40 million for rent supplements and $33 million for the Teacher Corps, the House insisted that nothing should be spent for these purposes. Most Republicans hoped to destroy the Office of Economic Opportunity (OEO). In this they expected support from Southern Democrats who were also critical of it, and thus forced Democratic leaders to make concessions to the Southerners in order to save the antipoverty agency. Democratic leaders agreed to cut Johnson's request of $2 billion for OEO by $400 million and to give local governments control of community action programs. The conservatives also treated the request for a rat-eradication bill with contempt and defeated it (although a similar measure later was approved).

The President had more support in the Senate. The senators authorized $18 million for the Teacher Corps, $537 million for the model cities program, $40 million for rent supplements, and more than he requested for OEO.

The summer riots stimulated the debate between the President and the Congress and between the different blocs in the legislative branch. Blaming agitators and conspirators, the conservatives employed the House Un-American Activities Committee and other investigating bodies to explore the sit-

CONGRESS CHASTISES TWO OF ITS MEMBERS

In 1967, the U. S. Congress employed its seldom-used powers of expulsion and censure. Adam Clayton Powell, 59, a New York (Harlem) Democrat, Baptist clergyman, and the most powerful Negro congressman, was charged with cheating the government and refusing to pay a libel judgment. His controversial personal life contributed to the growth of feeling against him. Most members of the House believed that he was treating the institution with contempt, and that its reputation was at stake in the Powell issue. After a special committee and the House leadership recommended that he should be censured, stripped of his seniority, and fined, the membership rebelled and on March 1 voted for a harsher penalty—expulsion from the House.

Powell, as the special committee had done, challenged the right of Congress to expel him. He insisted that racial prejudice lay behind the hostility toward him, and many Negroes agreed. He ran successfully for reelection on April 10 and demonstrated that he had gained greater popular support. But he did not return to Congress in 1967, remaining most of the year at his home on Bimini.

Shortly after the House expelled Powell, the Senate censured one of its Democratic members, 60-year-old Thomas Dodd of Connecticut. Charges that had originated with former employees of the senator, and had been publicized by two newsmen, were investigated by the Senate Select Committee on Standards and Conducts, or "ethics committee." It recommended censure on the grounds that Dodd's behavior was "contrary to accepted morals" and tended to bring the Senate "into dishonor and disrepute."

WIDE WORLD

Thomas J. Dodd

WIDE WORLD

Adam Clayton Powell

The committee charged that he had diverted campaign funds to his personal use and had billed the Senate for travel expenses that had been paid by private groups. Dodd maintained that he had the right to use the funds as he saw fit and that the cost of officeholding had forced him to seek support in this fashion. The Senate accepted the charge of diversion of funds and on June 23 voted 92 to 5 for censure. While some persons objected that he should have been punished as severely as Powell had been, others argued that censure was enough to destroy the senator's political career.

uation, and they obtained passage by the House of a bill designed to punish "outside agitators."

The Senate did not pass this bill. In that body, liberal Democrats such as Robert Kennedy of New York, Abraham Ribicoff of Connecticut, and Joseph Clark of Pennsylvania, and moderate Republicans, including Charles Percy of Illinois and Jacob Javits of New York, worked for new programs to supply jobs and improve housing in the slums.

The President now found himself in the middle. He criticized agitators and insisted that violence must and would be suppressed, but he rejected the conspiracy thesis and blamed social and economic conditions. Nevertheless, he did not call for vast new programs. Instead, he established his own investigative body, the Commission on Civil Disorders, and tried to persuade Congress to provide funds for programs that had been established earlier. He also implied that the opponents of these programs were one cause of the riots. While insisting that the situation demanded passage of his proposals, he worked successfully against the newer ones, fearing that they would be too costly and would drain funds away from his programs.

The outcome was continuation of Johnson's programs but at lower levels of expenditures than he had suggested and with changes in administration. Final bills called for $13.5 million for the Teacher Corps, $312 million for model cities, $10 million for rent supplements, and $1.77 billion for the antipoverty program. New local control features for some of the OEO programs were also accepted by both houses. The House, in response to criticism from the President and many others, had second thoughts about the rat control proposal, and authorized $40 million for that purpose over a two-year period.

In other domestic areas, the President's record in Congress was mixed. While he failed to achieve passage of his proposals on civil rights, taxes, crime and gun control, election reform, and truth-in-lending, he did obtain increases in social security benefits, the continuation of federal aid to education, higher postal rates, higher pay for government employees, stronger air pollution control laws, a public broadcast corporation, and a tighter meat inspection law. Although Congress cut his spending requests by nearly $6 billion, the size of the budget set a new record.

(See also CONGRESS and articles dealing with specific areas of legislation, such as ANTI-POVERTY PROGRAM; CITIES AND URBAN AFFAIRS; EDUCATION; HOUSING; SOCIAL SECURITY.)

The Economy. The economy in 1967, while prosperous, was not free of serious problems. In November, it moved into its 81st month of expansion, a new record. There had been a slowdown in the rate of growth during the first part of the year, due in part to the tight money policy of the Federal Reserve Board, and growth for the entire year was not as great as it had been in 1966. But output increased rapidly during the second half, as increases in government spending and changes in Federal Reserve money policy provided important stimuli. The gross national product reached close to $790 billion. Unemployment remained near the relatively low average of 1966 (3.8 percent of the labor force). One of the most important developments was the recovery made by the housing industry, which had been seriously hampered in 1966 by high interest rates.

Strikes plagued the economy during the year. Workers generally hoped to protect themselves against rising prices, and skilled workers sought to increase the income gap between them and the unskilled. Labor leaders tried to take advantage of the high profits of recent years, while industrialists, faced with smaller profits now, offered resistance. As a consequence, more man-hours were lost because of strikes than in any year since 1959.

There were significant strikes by teachers in New York City and other places and a very long strike in the copper industry that continued into 1968. A nationwide strike by railroad workers in July forced the federal government to intervene, and the longest strike in the history of the Ford Motor Company (from September 7 to October 22) produced the largest settlement in the history of the United Auto Workers. The agreement also provided a basis for settlements with Chrysler and General Motors. The leader of the automobile strike, UAW chief Walter Reuther, was also challenging George Meany's leadership of the AFL-CIO. (See also LABOR.)

Despite a drop in farm prices, 1967 was a year of inflation. After several months of relative stability at the beginning of the year, prices rose about 3 percent, the largest increase since 1956. Several factors stimulated the increases: the unusually successful wage demands of organized labor; the price policies of the automobile, steel, and other industries; the easy-money policies of the Federal Reserve Board; and heavy government spending, especially on the war. (See also ECONOMIC REVIEW.)

While the administration was mildly (and ineffectively) critical of the price policies of big business and the wage demands of big labor, it tried to employ tax policy as the chief weapon in the battle against inflation. The President called at first for a 6 percent surcharge on income taxes, and in August he raised the level to 10 percent. Administration spokesmen and their defenders on this issue, including most of the nation's economists and financial and business leaders, stressed the dangers of a runaway inflation. Arguments also emphasized the need to reduce the deficit in the budget without cutting back on essential expenditures. And advocates argued that if tax policy did not join the battle against inflation, monetary policy would be forced to bear the burden. The Federal Reserve Board would be compelled to raise interest rates once again, and the housing industry would suffer seriously from the credit squeeze.

Johnson encountered firm resistance in Congress on his tax request. Public opinion opposed the surcharge, as did some economists and businessmen who feared it would trigger a recession. Especially influential was the argument that a substantial cut in government spending was the best way to combat inflation. This was a major theme in the thinking of most Republican and southern Democratic members of Congress. Wilbur Mills of Arkansas, chairman of the House Ways and Means Committee, played the most important role in the battle against the President's proposal. He and other conservative congressmen insisted that Johnson must cut domestic spending by at least $5 billion before they would even consider his proposed tax increase. (See also TAXATION.)

By the end of the year, Mills remained unmoved by the administration's arguments and its spending cuts, and the tax proposal had not moved beyond his committee. Not even the fears for the

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WHITE HOUSE WEDDING took place in the East Room, December 9, when President Johnson's older daughter, Lynda Bird, was married to Marine Capt. Charles S. Robb.

dollar aroused by the British devaluation of the pound in November, and the consequent demand in Europe of gold for dollars, moved the Congress to act. Thus, the Federal Reserve Board tightened its money policy. Johnson had suffered one of his most significant defeats of the year.

Defense. Congress and the President agreed in 1967 on defense spending, but conflict prevailed in many other areas of defense policy. Major battles raged over the draft and the Central Intelligence Agency, and friction between Secretary of Defense Robert McNamara and military chiefs reached new highs.

McNamara and the Joint Chiefs of Staff clashed over the deployment of an anti-ballistic missile (ABM) system. He argued that installation of such a system would be a costly and wasteful expenditure of funds and that the nation should rely on its persuasive retaliatory power for its defense, at the same time trying to persuade the Russians not to deploy a defensive system. The military chiefs, some congressmen, the defense industry, and many Republicans contended that the reported Soviet decision to deploy anti-ballistic missiles meant that the United States must also do so in order to remain secure. In September, following new evidence of Communist Chinese progress in the nuclear field and no success in efforts to talk the USSR out of deployment, McNamara announced a decision to deploy a limited ABM system, designed chiefly to protect the nation from possible attack by China. At the same time, he warned again against the construction of a large system. (See also MISSILES.)

The bombing of North Vietnam stimulated another clash. While McNamara had become skeptical of its effectiveness, military leaders and some key congressmen demanded expansion of the air war in North Vietnam. By fall, new escalation of U. S. bombing suggested that the President was accepting the advice of the secretary's critics.

Late in November, the administration announced that McNamara would leave the Pentagon to become president of the World Bank. Although the official explanation insisted that the secretary had resigned because he was tired and had found the new opportunity attractive, and that no change in U. S. policy would result, many observers were convinced that he had been forced out and that his departure would be followed by further escalation of the war and enlargement of the anti-missile system. On Jan. 19, 1968, President Johnson nominated Clark Clifford, a long-time presidential adviser, to succeed McNamara when the latter left office on February 29. Clifford was sworn in on March 1.

(See also NATIONAL DEFENSE and articles on the separate branches of the armed forces.)

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UNITED STATES CONGRESS. See CONGRESS.

UNITED STATES SUPREME COURT. See LAW; SUPREME COURT.

UNIVERSITIES. See COLLEGES AND UNIVERSITIES; EDUCATION.

UPPER VOLTA

The military regime of President Sangoulé Lamizana, which came to power following an army coup in January 1966, held a tight rein on Upper Volta throughout 1967. Political activity was suppressed, and rigid austerity was imposed.

Internal Affairs. In December 1966, President Lamizana announced that because of economic and political difficulties the army would rule Upper Volta for another four years. Lamizana also restored the ban on political parties. On Dec. 26, 1966, former President Maurice Yameogo, still under house arrest, attempted suicide.

In July 1967, Yameogo's wife and son, and the son of the former president of the Upper Volta Assembly, were implicated in an alleged plot to restore Yameogo to power and were arrested. In April, President Lamizana reshuffled his cabinet, dropping 3 civilian ministers and increasing the number of military men in the 13-member cabinet from 7 to 8.

Foreign Relations. During 1967, Upper Volta sought to improve its relations with neighboring Ghana. Two agreements were reached: one for the repayment of a $5.6 million loan provided Yameogo's government by former Ghanaian President Kwame Nhrumah; the other, for Upper Voltan purchase of power from a new Ghanaian hydroelectric facility. An Upper Voltan goodwill mission toured the Soviet Union, and the two nations exchanged ambassadors.

UPPER VOLTA • Information Highlights

ASIA
AFRICA

Area: 105,869 square miles (274,200 sq km).
Population: 5,054,000 (July 1, 1967 est.).
Chief City (1962 est.): Ouagadougou, the capital, 63,000.
Government: *President*—Lt. Col. Sangoulé Lamizana (took office Jan. 3, 1966).
Religious Faiths: Muslims, 26% of population; Roman Catholics, 3.5%; others, 70.5%.
Education: *Total school enrollment* (1964)—90,827 (primary, 84,370; secondary, 4,538; teacher-training, 1,082; technical, 837).
Finance (1967 budget est.): *Revenues*, $33,000,000; *expenditures*, $33,000,000; *monetary unit*, CFA franc (246.85 francs equal U. S.$1).
Gross Domestic Product (1964): $229,390,000.
Cost of Living Index (1966): 152 (1958=100).
Manufacturing (metric tons): Meat (1964), 11,000; beer (1965), 3,300.
Crops (metric tons, 1965): Sorghum, 750,000; millet, 360,000; maize, 110,000; peanuts (1966), 108,840; sweet potatoes and yams (1964), 41,000; cottonseed (1965 est.), 10,000.
Chief Mineral (1965): Gold, 34,468 troy ounces.
Foreign Trade (1966): *Exports*, $16,158,800 (chief exports, 1964: cattle, $4,420,000; sheep, lambs, and goats, $1,523,200; oilseeds, oil nuts, and oil kernels, $1,405,700; hides and skins, 1,016,800); *imports*, $37,717,400 (chief imports, 1964: woven cotton fabrics, $4,099,600; crude vegetable materials, $3,018,000; motor vehicles, $2.969,400). *Chief trading partners* (1964): France (took 16% of exports, supplied 52% of imports); Ivory Coast (took 33% of exports, supplied 16% of imports); Ghana (took 30% of exports, supplied 5% of imports).
Transportation: *Roads* (1965), 10,380 miles (16,705 km); *motor vehicles* (1965), 7,722 (automobiles, 3,932); *principal airport*, Ouagadougou.
Communications (1967): *Telephones* (est.), 2,600; *television sets*, 250; *radios* (1964), 50,000; *newspapers* (1957), 2 (daily circulation, 500).

Economic Development. The 1967 "austerity budget" was balanced at $33 million without foreign subsidy. This was accomplished, however, by raising taxes, reducing civil servants' allowances, abolishing production incentive bonuses, and requiring workers to give the government half of their monthly pay for six months as a "patriotic contribution." In April the government announced its 1967–70 development program, which included accelerated production of cotton and peanuts, as well as the construction of a 219-mile (353-km) railway between Ouagadougou and Dori to permit exploitation of manganese deposits at Tambao.

Upper Volta continued to receive limited aid from France, the United States, the European Development Fund, and the United Nations. The most important new aid project of 1967 was a $7.4 million modernization of the Ouagadougou-Ghana road link, to be financed by the European Economic Community.

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URBAN AFFAIRS. See CITIES AND URBAN AFFAIRS; HOUSING.

URUGUAY

It is no exaggeration to say that 1967 was a time of severe danger for Uruguay. The danger was averted because of the nation's tradition of civilian politics and observance of the law. Although a new constitution was adopted in the elections of November 1966, economic, social, and political conditions continued to deteriorate during most of 1967.

President Oscar D. Gestido, who was inaugurated for a 5-year term as Uruguay's chief executive on March 1, died on December 6. He was succeeded by his vice president, Jorge Pacheco Areco.

President Gestido's nine months in office were hectic for him and for Uruguay. When he took office, Uruguay was faced with one of the worst financial crises in its history. There was opposition on all sides to many of the measures the president introduced to meet the crisis. On October 9 he declared a state of siege to control social and labor disorders; half of his cabinet resigned in protest. The legal state of siege was ended on October 23. Six days later he challenged his former treasury minister and severe critic, Sen. Amilcar Vasconcellos to a duel because of his attacks on the regime. However, the duel was canceled on November 1. The president devalued the peso (the basic monetary unit of the country) by 100% on November 6. It was the sixth devaluation within a year.

Politics. Uruguay's new presidential constitution, adopted in 1966, was both advantageous and disadvantageous to President Gestido. Under the new document there is a single executive who appoints his own cabinet and is responsible for national policy. He can also dissolve the General Assembly if it denies him its backing on critical issues.

President Gestido, however, was hampered by several situations: a vast bureaucracy indifferent to principles of competence; his minority position within his own Colorado party (since he led only one of four factions); an electoral system that permits infinite proliferation of party factions and destroys intraparty discipline; an overextended social welfare system, relative to the strength of the economy; an economy so socialist that private investors are

PRESIDENT JOHNSON addresses members of the Organization of American States at the summit conference that was held in Punta del Este, Uruguay, in April.

UPI

harassed and discouraged, and flight of capital is endemic; a powerful, free trade union movement controlled, in some critical sectors, by Communists; and a national attitude that tends to equate executive effectiveness with dictatorship.

President Gestido won the 1966 election by only 40,000 votes, a relatively unimpressive mandate. Since he was a retired air force general, he was doubly reluctant to act forcefully lest he be called a dictator. The Convención Nacional de Trabajadores (CNT), the Uruguayan labor confederation, sought to bring about social chaos and the government's collapse through continued massive and sustained strikes. The nominal opposition party, the Blancos, stood by and observed, as is customary in Uruguayan politics. When, in November, Gestido reorganized the cabinet, a government by coalition of Colorado party factions resulted.

Economy. Economic policy in Uruguay has always been eclectic and nationalist. Although socialism is a dogma, the weak government has always yielded to interest groups. The principal issue in 1967 was relations with the International Monetary Fund, from which Gestido sought a standby loan.

The Fund maintained its usual conservative demands for a unified exchange rate and relatively free trading. The November devaluation was designed to improve the international trade picture. It was a bitter blow to the public, already hit by over 100% inflation during the year.

Agriculture is the basis of Uruguay's economy and foreign trade. In 1966, with severe controls on imports, Uruguay had a trade surplus of $21.6 million. Expecting the devaluation, producers withheld commodities from the market for much of the year, leading to expectations of a deficit in 1967. Severe drought and floods also harmed agriculture, however.

The 1968 budget had been estimated in October at 55 billion pesos ($550 million). Heavy worker and union demands will affect this figure. The shortage of goods and speculation in consumer essentials were forcing severe government restraints. Since the Uruguayan economy depends greatly on imported goods, shortages were expected to increase.

Punta del Este. A summit conference of 19 American presidents—including Lyndon B. Johnson

URUGUAY • Information Highlights

SOUTH AMERICA

Area: 68,536 square miles (177,508 sq km).

Population: 2,783,000 (July 1, 1967 est.).

Chief Cities (1963 census): Montevideo, the capital, 1,154,465; Salto, 57,714; Paysandú, 51,645; Rivera, 41,266.

Government: *President*—Jorge Pacheco Areco (took office Dec. 6, 1967); *Parliament*—(National Assembly) Senate, 31 members (Colorado, 16; Blanco, 13; Communist, 1; Christian Democrat, 1); Chamber of Deputies, 99 members (party seating, 1967: Colorado, 50; Blanco, 41; Communist, 5; Christian Democrat, 3).

Religious Faiths: Roman Catholics, 66.6% of population.

Education: *Literacy rate* (1963), 90% of population aged 15 and over. *Total school enrollment* (1963–64)—450,248 (primary, 319,512; secondary, 85,155; teacher-training, 3,884; technical, 26,750; higher, 14,947).

Finance (1967 budget est.): *Revenues*, $254,000,000; *expenditures*, $277,084,000; *monetary unit*, peso (free rate 198/200 pesos equal U. S.$1).

Gross National Product (1964): $436,411,000.

National Income (1964): $383,642,000; average annual income per person, $143.

Economic Indexes: *Agricultural production* (1965), 102 (1956–57=100); *cost of living* (1966), 1,230 (1958=100).

Manufacturing (metric tons, 1965): Cement, 431,000; gasoline, 269,000, sugar (1966), 90,000; wine (1963), 73,000.

Crops (metric tons): Sugar beets (1964), 400,000; wheat (1966), 325,000; corn (1966), 135,000; grapes (1964), 119,000; oats, (1965), 89,000.

Minerals (metric tons, 1965): Limestone (1964), 750,394; sand and gravel (1964), 524,587; lime, 60,000.

Foreign Trade (1966): *Exports*, $185,800,000 (chief exports: wool, $84,400 000; meat, $45,200,000; hides, $16,800,000; wheat, $7,400,000; linseed oil, $2,600,000); *imports*, $164,000,000 (chief imports, 1965: motor vehicle parts and accessories, $5,900,000; drugs, chemicals, and pharmaceutical products, $5.610,000; raw cotton, $3,820 000). *Chief trading partners* (1965): U. S. (took 17% of exports, supplied 14% of imports); Britain (took 16% of exports, supplied 10% of imports).

Transportation: *Roads* (1965), 23,488 miles (37,800 km); *motor vehicles* (1965), 211,900 (automobiles, 120,000); *railways* (1964), 1,866 miles (3,003 km); *merchant vessels* (1966), 16 (107,000 gross registered tons); *state airline*, PLUNA; *principal airport*, Montevideo.

Communications (1967): *Telephones* (est.), 190,000; *television stations*, 6; *television sets*, 200,000; *radios* (1964), 910,000; *newspapers* (1963), 35.

WIDE WORLD

URUGUAYAN demonstrators, carrying striped Cuban flag, protest against the OAS conference held at Punta del Este.

—met at Punta del Este, Uruguay (April 12–14) to discuss cooperative programs for the economic and social advancement of the Western Hemisphere. Among other decisions, the leaders pledged themselves to begin forming a Latin American common market in 1970. (See also LATIN AMERICA.)

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UTAH

The State Legislature, Republican-controlled as a result of the 1966 elections, met in regular biennial session from January 9 to March 9. Elections in Utah in 1967, which were limited to municipalities, yielded no politically important results. Economically, the state felt the effects of the nationwide copper strike, which began in mid-July and still continued at year's end.

Legislation. During the 60-day session the legislature passed 226 acts and 37 resolutions. Notable among these was an act creating a legislative watchdog committee, called the Joint Investigation Committee, as an arm of the legislature to investigate the executive branch between legislative sessions. The state attorney general ruled the act to be unconstitutional. When the committee refused to abide by the ruling, an injunction was obtained on October 23 from the Third District Court, prohibiting the committee from further action.

Public Finance. Apparently an indirect result of the copper strike was the decline in state revenue that led Gov. Calvin L. Rampton, by executive order in August, to cut the budget for every state agency by 4% for the fiscal year 1967–68.

UTAH • Information Highlights

Area: 84,916 square miles (219,933 sq km).
Population: 1,022,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Salt Lake City, the capital, 195,000; Ogden, 74,500; Provo, 39,500; Holladay, 33,000; East Millcreek, 23,000; Bountiful, 22,500; Kearns, 21,000.
Government: *Chief Officers*—governor, Calvin L. Rampton (Democrat); secy. of state, Clyde L. Miller (D); atty. gen., Phil L. Hansen (D); treas., Linn C. Baker; supt. of pub. instr., T. H. Bell; chief justice, J. Allan Crockett. *Legislature* (convened Jan. 9, 1967)—Senate, 28 members (23 Republicans, 5 Democrats); House of Representatives, 69 members (59 R, 10 D).
Education: *School enrollment* (1965–66)—public elementary, 172,600 pupils (5,662 teachers); public secondary, 121,800 pupils (4,971 teachers); nonpublic, 6,800 pupils (310 teachers); college and university (fall 1965), 58,323 students. *Public school expenditures* (1965–66)—$127,732,000 ($473 per pupil); average teacher's salary, $6,250.
Public Finance (fiscal year 1966–67): *Revenues*, $320,429,553 (3% sales tax, $55,885,585; motor fuel tax, $26,826,915; federal funds, $96,555,186). *Expenditures*, $337,694,569 (education, $145,406,555; health, welfare, and safety, $47,016,859; highways, $81,553,103). *State debt*, $71,306,853 (June 30, 1967).
Personal Income (1966): $2,502,000,000; average annual income per person, $2,485.
Public Assistance (fiscal year 1967): $26,343,138 to 36,916 cases (aged, $5,088,144; dependent children, $12,230,351).
Labor Force (employed persons, Sept. 1966): *Agricultural*, 19,500; *nonagricultural* (wage and salary earners), 326,000 (16% manufacturing, 22% trade, 28% government). *Unemployed persons* (Sept. 1966)—12,000.
Manufacturing (1965): Value added by manufacture, $683,163,000 (petroleum and coal products, $39,085,000; printing and publishing, $30,165,000; nonelectrical machinery, $40,900,000; electrical machinery, $28,858,000; fabricated metals, $33,112,000; food and products, $95,984,000).
Agriculture (1966): *Cash farm income* $197,217,000 (livestock, $150,261,000; crops, $37,239,000; govt. payments, $9,717,000). *Chief crops* (tons)—hay, 1,463,000; sugar beets, 512,000; wheat, 186,300; barley, 163,200; potatoes, 74,400; oats, 17,136; apples, 7,440.
Mining (1966 est.): *Production value*, $439,234,000. *Chief minerals* (tons)—sand and gravel, 10,200,000; bituminous coal, 4,900,000; stone, 2,204,000; iron ore, 2,178,400; salt, 380,000; copper, 263,160; uranium ore, 226,900; silver, 7,475,000 troy ounces; gold, 433,850 troy ounces.
Fisheries (1965): *Commercial catch*, 447,000 pounds ($59,000).
Transportation: *Roads* (1967), 37,611.4 miles (60,517 km); *motor vehicles* (1967), 580,333; *railroads* (1966), 3,044.08 track miles (4,898 km); *airports with scheduled services*, 4.
Communications (1967): *Telephones*, 497,600; *television stations*, 8; *radio stations*, 39; *newspapers*, 5 (daily circulation, 262,758).

During 1967, state, county, and city expenditures for highway safety reached a level of $8 million annually. Significantly, the death toll on state public roads in 1967 fell considerably below the highs of 1966.

Municipal Elections. Because most municipal elections either are nonpartisan or contested by local parties, no national significance usually attaches to the results. In Salt Lake City, Republican Mayor J. Bracken Lee won a third term.

Sewage Treatment Facilities. After many years of seeking voluntary cooperation from Utah communities, the state board of health imposed a 5-year deadline on the remaining 29 cities and towns without any sewage treatment facilities and on the 19 communities with inadequate facilities. Under the voluntary phase of cooperation, communities housing more than 95% of the total state population had achieved adequate sewage treatment. The problem in some recalcitrant communities is financial, since both the state board of health and the state water pollution committee have the authority to order that facilities be installed or brought up to standard but neither of those agencies can compel the people to pay for new facilities.

Rapid Transit. Rapid transit problems in Salt Lake City came to a head during the last quarter of the year. The city commission passed an ordinance authorizing the city to take over the bus lines from a private company, but the constitutionality of the ordinance was being tested at year's end.

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VANCOUVER

Tom Campbell, the mayor of Vancouver, tangled with the 2,000-member hippie community in 1967 by temporarily cancelling the license of the enormously successful *Georgia Straight*, the hippie newspaper that had reached a circulation of about 60,000. The mayor charged the journal with corrupting the morals of the young and outraging the good taste of their elders. The paper's editor, Dan McLeod, countercharged that Campbell was harrying the hippies because it was politically profitable.

In other matters, the provincial and federal governments continued to squabble about the development of a new port off the mouth of the Fraser River immediately south of Vancouver. The port will be designed primarily to serve cargo carriers in the 100,000-ton class, and, as an export port, will be controlled by the National Harbors Board.

The new port is necessary to supplement the already crowded Port of Vancouver, which in 1966 maintained its position as the leading bulk-loading port on the Pacific Coast and challenged Montreal's position as the leading port of Canada. In 1966, Montreal handled 24.8 million tons of cargo, compared with Vancouver's 21.7 million tons. However, Vancouver's port is expanding at a much faster rate than Montreal's and is expected to surpass Montreal by 1969. Vancouver ships primarily lumber, pulp, sulfur, fish, potash, coal, and cereals. Wheat shipments rose from 3.8 million tons in 1965 to 4.7 million tons in 1966; potash shipments increased from 684,449 tons to 1,128,159 tons in 1965.

Transit problems continued to plague Vancouver in 1967, holding up much-needed development, especially along the city's busy waterfront. A civic plan to connect the Trans-Canada Highway and the $200 million Waterfront Project 200 by a route through the city's historic Chinatown raised such a storm of protest from the Chinese community and other citizens that the plan was ultimately given up. A $24 million International Airport was nearing completion in 1967, despite the lack of adequate connecting roads and bridges.

Vancouver's civic budget for 1967 was nearly $90 million. The major civic improvement under way was the $3.5 million H. R. MacMillan museum-planetarium, due to open in the summer of 1968.

The University of British Columbia enrolled a record 18,359 day students and 1,700 night students in 1967; Simon Fraser University enrolled 5,013; and Vancouver City College enrolled 3,763.

JOSEPH C. LAWRENCE
The University of British Columbia

VEGETABLES

U. S. production of the 27 principal fresh-market vegetables and melons in 1967 was 3% higher than in 1966. New vegetable production highs were set for artichokes, broccoli, lettuce, and onions. Crops making major contributions to the generally increased production for 1967 were onions, cabbage, sweet corn, and celery.

Processed Vegetables. The output for the 10 principal processing crops totaled 9,910,390 tons in 1967. This was the highest tonnage of processing vegetables on record in the United States—11% above the 1966 tonnage and 18% above the 1961–65 average. Yields per acre averaged above 1966 levels for all processing vegetables except asparagus, cucumbers for pickles, and spinach. Record high yields were estimated for lima beans, cabbage for sauerkraut, and sweet corn.

Table 1—U.S. PRODUCTION OF VEGETABLES FOR COMMERCIAL PROCESSING
(In tons)

Vegetables	Average 1961–65	1966	Preliminary 1967
Asparagus	128,980	128,500	110,950
Beans, lima (shelled)	96,850	104,450	115,670
Beans, snap	482,870	521,920	620,590
Beets (for canning)	191,820	193,910	206,950
Cabbage (for sauerkraut)	205,200	179,560	264,950
Corn, sweet (in husk)	1,659,790	1,962,400	2,094,600
Cucumbers (for pickles)	428,900	533,950	589,640
Peas, green (shelled)	527,660	509,100	581,820
Spinach	138,900	145,870	161,620
Tomatoes	4,567,190	4,660,570	5,164,250
Total, 10 crops	8,428,150	8,940,230	9,910,390

(Source: Statistical Reporting Service, U.S. Department of Agriculture.)

The 10 crops were harvested from 1,933,430 acres. Their value was $526,094,000, up 21% from 1966. Since 1964 the value of the crop has been determined at the packing house door and thus is not comparable with value reported for earlier years—a value based on average price at the first receiving point. California produced 34.9% of the nation's processed vegetables in 1967. Wisconsin ranked second with 8.5%, followed by Minnesota and Ohio, both with 6.1%, and New York with 4.9%.

Table 2—U.S. PRODUCTION OF COMMERCIAL VEGETABLES AND MELONS FOR FRESH MARKET
(In hundredweight)

	Average 1961–65	1966	Preliminary 1967
Vegetables:			
Artichokes	528,000	668,000	730,000
Asparagus	1,041,000	842,000	822,000
Beans, green lima	359,000	279,000	288,000
Beans, snap	4,119,000	3,633,000	3,792,000
Beets	391,000	326,000	297,000
Broccoli	2,282,000	2,677,000	2,785,000
Brussels sprouts	707,000	734,000	606,000
Cabbage	18,843,000	18,123,000	19,334,000
Carrots	16,885,000	17,386,000	17,321,000
Cauliflower	2,544,000	2,511,000	2,524,000
Celery	14,312,000	14,827,000	15,336,000
Corn, sweet	13,047,000	12,158,000	12,957,000
Cucumbers	4,724,000	4,713,000	4,773,000
Eggplant	552,000	553,000	567,000
Escarole	1,043,000	1,143,000	1,122,000
Garlic	408,000	350,000	506,000
Kale	102,000	78,000	72,000
Lettuce	38,984,000	42,130,000	42,608,000
Onions	25,842,000	24,751,000	28,397,000
Peas, green	196,000	70,000	80,000
Peppers, green	3,914,000	4,101,000	4,196,000
Shallots	28,000	25,000	32,000
Spinach	1,114,000	876,000	901,000
Tomatoes	20,625,000	20,740,000	20,485,000
Total vegetables	172,590,000	173,694,000	180,585,000
Melons:			
Cantaloupes	12,679,000	10,753,000	11,802,000
Honeydew melons	1,333,000	1,216,000	1,527,000
Watermelons	29,286,000	28,941,000	27,665,000
Total vegetables and melons	215,888,000	214,604,000	221,579,000

(Source: Statistical Reporting Service, U.S. Department of Agriculture.)

Fresh Vegetables. Production of the 27 principal vegetables and melons for the fresh market in 1967 totaled 222,000,000 cwt (hundredweight), compared with 1966 production of 215,000,000 cwt and the 1961–65 average annual production of 216,000,000 cwt. It was produced from 1,631,020 acres, compared with 1,617,015 in 1966. The 27 crops of fresh vegetables and melons were valued at $1,122,363,000, compared with $1,137,043,000 in 1966 and the 1961–65 average of $934,232,000.

Potatoes. Production of potatoes in the United States (excluding Hawaii and Alaska) in 1967 was 305,906,000 cwt—slightly less than the 1966 crop but 12% above the 1961–65 average. Acreage har-

Table 3—U. S. PRODUCTION OF FROZEN VEGETABLES
(In pounds)

Product	1965	1966
Asparagus	30,867,000	34,532,000
Beans, green, regular cut	112,476,000	136,357,000
Beans, green, French cut	61,716,000	77,748,000
Beans, green, whole	3,026,000	3,809,000
Beans, green, Italian	4,560,000	6,918,000
Beans, wax	7,751,000	6,944,000
Broccoli	122,310,000	158,586,000
Brussels sprouts	37,339,000	51,698,000
Butter beans	18,515,000	15,061,000
Carrots, diced	76,228,000	103,610,000
Carrots, sliced	33,310,000	27,517,000
Cauliflower	46,211,000	53,985,000
Celery	2,528,000	4,938,000
Collards	12,301,000	12,277,000
Corn, cut	222,185,000	300,165,000
Corn on cob	40,337,000	44,241,000
Kale	4,322,000	4,623,000
Lima beans, baby	81,425,000	89,693,000
Lima beans, Fordhook	64,102,000	62,224,000
Mixed vegetables	57,086,000	60,231,000
Mustard greens	7,860,000	8,428,000
Okra	30,365,000	38,327,000
Onions	15,794,000	18,572,000
Peas, blackeye	26,037,000	29,780,000
Peas, green	443,289,000	375,360,000
Peas and carrots	21,666,000	27,511,000
Potato products	1,218,529,000	1,459,633,000
Pumpkin and cooked squash	17,390,000	19,697,000
Rhubarb	5,801,000	6,690,000
Spinach	122,264,000	142,931,000
Squash, summer	10,987,000	11,990,000
Succotash	6,672,000	6,471,000
Sweet potatoes and yams	9,353,000	10,506,000
Turnip greens	20,971,000	20,442,000
Turnip greens with turnips	1,295,000	6,651,000
Miscellaneous vegetables	21,664,000	20,453,000
Total	3,081,532,000	3,458,599,000

(Source: National Association of Frozen Food Packers.)

vested in 1967, at 1,457,800, compared with 1,464,000 harvested in 1966. Production by seasons for 1967 was (in hundredweight): winter, 4,894,000; early spring, 2,940,000; late spring, 23,734,000; early summer, 13,773,000; late summer, 28,491,000; and fall, 232,074,000.

Idaho led with 63,900,000 cwt, followed by Maine (38,160,000); California (33,488,000); Washington (22,090,000); and New York (17,773,000).

Sweet Potatoes. The 1967 crop of 14,032,000 cwt was 2% more than in 1966 but 6% less than the 1961–65 average. The yield of 95 cwt of sweet potatoes per acre was a record high. The crop was harvested from 148,100 acres—a record low, 6% less than in 1966 and 16% below average. Louisiana harvested the largest crop of sweet potatoes among the states—4,400,000 cwt. Other leading states were: North Carolina with 2,185,000 cwt; Virginia, 1,656,000; Mississippi, 1,105,000; California, 850,000; and Texas 810,000.

Dry Beans. Production of 15,500,000 bags (100-pound clean basis) was the smallest crop in 15 years. It was well below the record 1966 crop of 20,000,000 bags and the 5-year average of 18,300,000 bags. Farmers harvested the crop from 1,225,000 acres, the smallest acreage in 45 years and down from the 1966 figure of 1,486,000 acres. The yield of 1,296 pounds per acre was below the 1966 yield of 1,343 pounds and the average yield of 1,296 pounds per acre. Michigan produced about 35% of the national crop.

Dry Peas. Production of dry peas in 1967 totaled 3,751,000 bags (100-pound clean basis), 1% less than was grown in 1966 and 17% below the 1961–65 average. The average yield of 1,556 pounds per acre was 272 pounds below the 1965 record high but 44 pounds above the 1961–65 average. The state of Washington, with 1,856,000 bags, produced the largest dry pea crop of 1967.

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VENEREAL DISEASES

Venereal diseases continued to rank among the major communicable diseases in the United States during 1967. In the period from July 1966 to June 30, 1967, there were 480,447 reported cases of venereal disease, an increase of 8% over the previous twelve months.

This new figure represented the largest number of cases of venereal diseases reported in any year since 1950.

Incidence. Of the total number of cases of venereal diseases reported in 1967, syphilis accounted for 21.6%, and gonorrhea accounted for 78.2%. The three other venereal diseases—chancroid, granuloma, inguinale, and lymphogranuloma venereum—accounted for only 0.2%. In 1950 the percentage distribution was quite different. Syphilis accounted for 42.3% of all the reported cases, while gonorrhea accounted for 56.0%, and the remaining venereal diseases accounted for 1.7%.

From July 1, 1966 to June 30, 1967, the 103,546 cases of syphilis reported in the United States represented a 6.1% decrease from the previous 12 month total. Of these reported cases, 21,090 were diagnosed as being in either the primary or secondary stage of the disease. Cases in the early latent stage numbered 15,618, while 62,653 were in late or late latent states and 3,050 were congenital (present at birth).

In the 12 months ending June 30, 1967, 375,606 cases of gonorrhea were reported, an increase of 12.1% over the preceding 12-month period. This figure represented the greatest number of cases reported in any year since 1947. The number of cases of chancroid, granuloma inguinale, and lymphogranuloma venereum during 1967 were 787, 128, and 380, respectively.

National Syphilis-Control Program. The decline in the incidence of syphilis during 1967 can be largely attributed to the efforts of a national syphilis-control program. This program is composed of five major elements: reporting, serologic screening, epidemiology, education, and research.

The reporting aspect of the program consists of the collection, summarization, and dissemination of data concerning the incidence of venereal disease for the purpose of identifying and isolating epidemics and also for determining the effectiveness of the control program.

The surveillance of serologic screenings, such as premarital, prenatal, and preemployment blood tests, is aimed at identifying syphilis patients. The epidemiological aspect of the program is concerned with following the sexual contacts of known syphilis patients in order to control the spread of the disease and determine its source.

The educational projects developed by the control program are aimed at increasing the public's awareness of the venereal disease problem. The research aspect of the program is directed toward developing more efficient and effective serologic tests, finding better methods of treatment, and discovering an immunizing agent to prevent the disease.

No nationwide disease-control program has yet been implemented for the control of gonorrhea. This is due to the lack of effective diagnostic tests for female patients.

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VENEZUELA

In 1967 the government of Venezuela continued to be plagued by the armed insurrection of bands of leftist terrorists who oppose the nation's political system.

Internal Disorders. Constitutional guarantees, which had been suspended on Dec. 13, 1966, in the wake of intensified terrorist activity, were restored by President Raúl Leoni on March 2, 1967, after a period of relative calm. They were suspended again 48 hours later following the guerrilla assassination on March 3 of Julio Irabarren Borges, a former director of social security and the brother of Foreign Minister Ignacio Irabarren Borges. Two other Venezuelans subsequently lost their lives in outbreaks of violence: the guerrilla warrior son of the anti-Communist governor of the state of Falcón, and the treasurer general of the state of Guárico.

The Venezuelan government accused Cuban Premier Fidel Castro of fomenting the incidents. It secured tangible evidence of its charge on May 8, when Venezuelan forces arrested a landing party of guerrillas composed of Cubans and defecting Venezuelans on a beach about 65 miles (105 km) southeast of Caracas. Several weeks later the Communist party of Cuba admitted responsibility for the landing and vowed to continue aiding the revolutionaries in Venezuela.

Venezuela formally charged Cuba with subversion before the Organization of American States (OAS). On June 26 the OAS issued a resolution substantiating Venezuela's charges that Cuba had supported the guerrilla landing. Venezuela, which had expected a stronger condemnation than the OAS resolution, took its complaint before the United Nations. (See also LATIN AMERICA.)

Economic Affairs. The Venezuelan gross national product increased by only 3% in 1966, compared with 7% in 1965. Economists attributed the slump to a decline in the rate of petroleum production and to the business community's lack of confidence in the government after it raised taxes and introduced a direct levy on dividend payments in 1966. The 1967 economy showed signs of recovering from the depressed 1966 level but was not expected to reach the 7.2% average annual increase in gross national product forecast in the national plan (1965–68).

Venezuela regards the growing industrial complex at Guayana as the cornerstone of its economic

U. S. STEEL INTERNATIONAL

ANGOSTURA BRIDGE spanning the Orinoco River near Ciudad Bolivar, Venezuela, opened on Jan. 6, 1967. The 2,336-foot suspension bridge is the longest in South America.

VENEZUELA • Information Highlights

NORTH AMERICA
SOUTH AMERICA

Area: 352,143 square miles (912,050 sq km).
Population: 9,352,000 (July 1, 1967 est.).
Chief Cities (1966 est.): Caracas, the capital (metropolitan area), 1,764,274; Maracaibo, 558,953.
Government: *President*—Raúl Leoni (took office March 11, 1964). *National Congress*—Senate, 50 members (party seating, 1967: Democratic Action (AD), 23; Christian Socialist (COPEI), 9; Republican Democratic Union (URD), 7; Democratic National Front (FND), 5; Chamber of Deputies, 179 members (party seating, 1967: AD, 65, COPEI, 40; URD 29; FND, 22; others, 23).
Religious Faiths: Roman Catholics, 92.5% of population.
Education: *Literacy rate* (1965), 89.5% of population. *Total school enrollment* (1964)—1,728,843 (primary, 1,397,017; secondary, 173,436; teacher-training, 17,336; technical, 82,100; higher, 58,954).
Finance (1966 est.): *Revenues*, $1,744,000,000; *expenditures*, $1,702,000,000; *public debt*, $489,000,000; *monetary unit*, bolívar (selling rate: 4.5 bolívares equal U. S.$1).
Gross National Product (1966): $7,939,000,000.
National Income (1966): $6,637,000,000; average annual income per person, $735.
Economic Indexes (1966): *Industrial production*, 146 (1958=100); *agricultural production* (1965), 172 (1956–57=100); *cost of living*, 109 (1958=100).
Manufacturing (metric tons, 1965): Residual fuel oil, 39,219,000; gasoline, 6,238,000; cement (1966), 2,112,000; crude steel, 625,000; sugar (1966), 40,000; beer, 277,900.
Crops (metric tons, 1965–66 crop year): Bananas, 1,230,000; corn (1966), 557,000; cassava, 301,000; rice (1966), 210,000; sweet potatoes and yams, 103,000; tomatoes, 72,000.
Minerals (metric tons, 1965: Crude petroleum (1966), 176,412,000 (ranks 3d among world producers); iron ore (1966), 17,844,000; limestone (1964), 2,507,000; salt, 99,770; gypsum, 75,000; lime, 65,300; bituminous coal (1966), 34,080; gold, 23,663 troy ounces; diamonds, 91,000 carats.
Foreign Trade (1966): *Exports*, $2,653,000,000 (chief export: petroleum, $2,452,000,000); *imports*, $1,138,000,000 (chief imports, 1965: nonelectrical machinery, $272,000,000; motor vehicles, $156,000,000). *Chief trading partners* (1965): U. S. (took 35% of exports, supplied 51% of imports); Netherlands Antilles (took 22% of exports); Canada (took 9% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 29,949 miles (48,197 km); *motor vehicles* (1965), 550,256 (automobiles, 384,399); *railways* (1965), 220 miles (354 km); *merchant vessels* (1966), 33 (288,000 gross registered tons); *national airlines*, LAV, AVENSA; *principal airport*, Caracas.
Communications: *Telephones* (1967): 308,898; *television stations* (1967), 30; *television sets* (1967), 650,000; *radios* (1965), 1,660,000; *newspapers* (1965), 33.

development. By 1980 the complex is expected to employ 300,000 persons, contribute 20% of the total national industrial output, and account for 20% of total exports. In its attempt to diversify production, the government began in 1967 to implement plans for an expanded petrochemical industry. In September the government approved a plan to construct a petrochemical complex near Lake Maracaibo at a cost of more than $400 million.

Foreign Affairs. In September, Venezuela was host to an OAS-sponsored inter-American conference on population problems. Representatives of 16 Latin American countries attended. The final report of the conference recommended adequate family planning for all of the Latin American countries to meet the challenge of the 3% annual population increase in the region.

Caracas became the headquarters of the Andean Development Corporation, a 5-nation agency set up to stimulate development in member states.

Social Developments. About 20,000 housing units were completed in 1966 and another 15,339 were started; by March 1967, 8,000 of them had been finished. Since 1960 a total of 8.4 million acres of land has been distributed to over 130,000 farmers, at a total cost to the government of $176 million. In the future only public lands will be distributed. A new water supply system is planned for several communities at a cost of $47.5 million.

Politics. With the approach of the 1968 elections, the major parties began to maneuver for support in 1967. Some observers felt that present trends favored the Christian Socialist party to supplant the ruling Democratic Action party. Both parties are split by internal dissension.

The administration sought to enforce the 13-year sentence handed down in 1966 on ex-President Marcos Pérez Jiménez, but final action was delayed by appeal.

Earthquakes. Caracas was hit by a series of devastating earthquakes on July 29 during a week of celebrating the city's 400th anniversary. The official death toll was placed at 277, and property damage was estimated at more than $150 million.

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VERMONT

Despite resistance from conservative members, the Republican-dominated General Assembly enacted a number of progressive statutes in 1967. The extensive changes proposed in the report of a special committee on administrative reorganization stirred debate that promised an interesting legislative session in 1968.

Legislation. Over protests from the Democratic minority, the legislature appropriated more than $1 million in excess of the governor's budget request for fiscal 1968–69. The general appropriations act for $130,300,000 was expected to cause further controversy and perhaps require new tax measures at the 1968 session. A major tax revision enacted by the assembly in 1967 placed the state income tax rate at 25% of the federal rate.

In other legislation the assembly enacted a fair housing code and created a commission on human rights. A widely supported welfare law revision centralized all welfare activities formerly handled by various agencies and abolished the office of overseer of the poor. Open dumps within sight of highways were outlawed, but the bitter battle between groups favoring an almost complete ban of roadside billboards and proponents of limited regulation was unresolved.

VERMONT • Information Highlights

Area: 9,609 square miles (24,887 sq km).
Population: 416,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Montpelier, the capital, 8,900; Burlington, 36,300; Rutland, 18,500; Brattleboro, 11,800; Barre, 10,100; Saint Albans, 8,800; Bennington, 8,000.
Government: *Chief Officers*—governor, Philip H. Hoff (Democrat); lt. gov., John J. Daley (D); secy. of state, Harry H. Cooley (D); atty. gen., James L. Oakes (Republican); treas., Peter J. Hincks; acting commissioner of educ., Daniel G. O'Connor; chief justice, James S. Holden. *Legislature*—General Assembly (convened Jan. 6–April 15, 1967): Senate, 30 members (22 Republicans, 8 Democrats); House of Representatives, 150 members (93 R, 55 D, 2 Independents).
Education: *School enrollment* (1965–66)—public elementary, 58,000 pupils (2,190 teachers); public secondary, 30,000 pupils (1,331 teachers); nonpublic schools, 19,900 pupils (940 teachers); college and university (fall 1965), 14,055 students. *Public school expenditures* (1965–66)—$39,593,000 ($475 per pupil); average teacher's salary, $5,631.
Public Finance (fiscal year 1966–67): *Revenues*, $159,167,846 (general sales and receipts tax, $64,375,531; motor fuel tax, $11,008,319; federal funds, $44,265,360). *Expenditures*, $183,483,110 (education, $30,021,792; health, welfare, and safety, $35,523,635; highways, $60,922,337). *State debt*, $81,974,000 (June 30, 1967).
Personal Income (1966): $1,066,000,000; average annual income per person, $2,595.
Public Assistance (fiscal year 1967): $6,587,447 to 11,893 recipients (aged, $3,207,514; dependent children, $2,202,622).
Labor Force (employed persons, mid-Aug. 1966): *Agricultural*, 19,000; *nonagricultural* (wage and salary earners), 141,800 (31.9% manufacturing, 17.7% trade, 14.4% government). *Unemployed persons* (mid-Aug. 1966)—6,200.
Manufacturing (1965): Value added by manufacture, $444,456,000 (paper and allied products, $29,878,000; primary metals, $6,660,000; nonelectrical machinery, $82,101,000; electrical machinery, $109,225,000.
Agriculture (1966): *Cash farm income*, $140,458,000 (livestock, $124,394.000; crops, $14,571,000; govt, payments, $1,493,000). *Chief crops* (tons)—maple syrup, 2,700 (ranks 2d among the states); hay, 1,092,000; potatoes, 16,600.
Mining (1966): *Production value*, $25,910,000. *Chief minerals* (tons)—stone, 2,649,716; sand and gravel, 2,323.000.
Transportation: *Roads* (1966), 13,789 miles (22,179 km); *motor vehicles* (1966), 181,438; *railroads* (1965), 826 track miles (1,327 km); *airports* (1966) 18.
Communications (1966): *Telephones* (1967), 181,700; *television stations*, 1; *radio stations*, 18; *newspapers*, 10.

Board of Education Controversy. At a secret session in June, the state board of education fired Richard A. Gibboney, the commissioner of education. Harvey B. Scribner, of Teaneck, N. J., was later appointed commissioner of education. The board's refusal to make public the reasons for its action aroused wide public disapproval. The board of education stirred up further controversy by closing several small high schools and tentatively scheduling several others for either closing or reform.

Proposed Atomic Power Plant. A year-long series of hearings on a proposed atomic generating plant on the Connecticut River resulted in tentative approval by the Federal Power Commission. The start of construction was delayed, however, because of opposition to the plant from neighboring states, which feared that potential ecological changes might be caused by waste water from the new plant.

Highways. There was considerable criticism of highway financing and construction during the year, especially after Russell A. Holden resigned as state highway commissioner and was replaced by Lauritz S. Larsen. Several more miles of interstate highway were opened during 1967, but too late to ease the heavy flow of tourists bound for Expo 67 in Montreal. The additional tourists brought to the state by the Canadian fair helped to give Vermont a very profitable summer season, but the crowded highways contributed to a record number of highway fatalities.

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VETERANS

Living veterans of U. S. military service totaled 25,846,000 in mid-1967. The youngest were the 4.5 million post-Korean War veterans, who averaged 27.4 years of age. Korean War veterans averaged 38 years of age and numbered 5.8 million. The 14.8 million World War II veterans averaged 47.8 years of age, and the 1.8 million World War I veterans' average age was 73. The oldest were the Spanish-American War veterans, numbering approximately 10,000 and averaging 88.7 years old. As of late 1967, only two veterans of the Indian Wars survived; they were 95 and 99 years old.

Since 1930 the Veterans Administration (VA) has administered benefits for U. S. veterans and their dependents. A considerable factor in the U. S. economy during the 1967 fiscal year was the $4.4 billion in compensation and pensions paid to 3.2 million living veterans and to 2 million dependents of deceased veterans.

New GI Bill. Veterans of the Vietnam war period, which officially began for the United States on Aug. 5, 1964, received equal wartime status with veterans of former wars under Public Law 90-77, signed Aug. 31, 1967. This was an amendment to the Veterans Readjustment Benefits Act of 1966, popularly known as the new GI Bill, which provided a permanent program of educational assistance and other benefits to all veterans who served in the U. S. armed forces after Jan. 31, 1955—the official termination of the Korean War. The new law also authorized cost-of-living increases in pensions, and substantially increased educational assistance allowances.

Readjustment Education Program. Beginning on Oct. 1, 1967, this program paid full-time students enrolled in institutional training from $130 (for a single veteran with no dependents) to $175 a month (for a veteran with two dependents, plus $10 a month for each additional dependent). It provided lower payments for apprenticeship or on-the-job training, farm-cooperative training, and, in special cases, flight training.

Full educational assistance allowances were paid to educationally disadvantaged veterans to enable them to complete high school or prepare to take college entrance examinations. This training does not affect eligibility for college-level or advanced training assistance.

Children of deceased or permanently and totally disabled veterans—whose disabilities are service-connected—were entitled to receive $130 a month for full-time college training for up to 36 months. In 1967 the age limit for these students in the War Orphans Education Assistance program was extended to 26. Servicemen with at least two years of continuous service also were eligible to participate in the educational assistance program while they remained in service. Their allowances were computed at the rate of established charges for tuition and fees or at the rate of $130 a month for a full-time course, whichever was less.

During the 1967 fiscal year, 469,600 post-Korean War veterans and servicemen received $251.6 million under the new GI Bill. The VA estimated that 604,600 would receive $520.3 million in educational allowances in the 1968 fiscal year. Of the trainees, 95% were veterans, and 72.4% of these trained at the college level.

Approximately 713,900 disabled veterans of peacetime service, World War II, and the Korean and Vietnam wars have received rehabilitation training to help them overcome their handicaps, at a cost of $1.86 billion.

GI Loans. During the 1967 fiscal year, 167,836 veterans received loans from private lenders on which payment was guaranteed or insured by the VA, bringing the total number of loans to more than 7 million, with an aggregate value of more than $67 billion. In some rural areas where ordinary lending facilities were not available, the VA made 11,719 direct loans amounting to more than $142 million. As of June 30, 1967, the VA had made 274,127 direct loans with a total face value of more than $2.5 billion. In 1967 veterans who have served since the Korean War received 70% of the loans.

Insurance. Since Sept. 29, 1965, every member of the U. S. armed forces has automatically received a $10,000 policy of Servicemen's Group Life Insurance (SGLI) unless he designated a preference for a $5,000 policy or none at all. A serviceman pays $2 a month for a $10,000 policy or $1 for a $5,000 policy, and the extra-hazard cost is paid by the U. S. government. The program is supervised by the VA. The insurance, issued by private companies, continues in force at no expense to the insured for 120 days after he is discharged from active duty. During that period he may obtain, without a physical examination, an individual policy from one of the 522 participating companies or one of the 18 companies that participate only in conversions to private policies.

At mid-1967 there was $34 billion of the new SGLI insurance in force for active-duty coverage, and an additional $2 billion in force for post-separation coverage. At the same time the VA was administering 5,879,886 GI insurance policies issued before May 3, 1966. During the 1967 fiscal year GI insurance-policy holders paid $620.8 million in premiums and received $207 million in dividends.

Medical Care. In 1967 the VA operated 165 hospitals and 202 outpatient clinics. The average daily patient load in VA hospitals was 103,394, and an additional 2,413 veterans were being treated in other hospitals at the VA's expense. Some 5.1 million visits were made to VA outpatient clinics. The cost of this medical care for veterans was approximately $1.3 billion. During the year 6,552 medical research studies were under way in VA medical facilities at an additional cost of $44.2 million. These studies constituted a substantial contribution to United States medical research.

Guardianship. The VA is guardian to incompetent veterans and the minor or incompetent dependents of veterans. This protection covered 647,805 persons during the 1967 fiscal year. The value of their estates was $700 million.

William J. Driver
Veterans Administration

VETERINARY MEDICINE

A serious epidemic of foot-and-mouth disease occurred in Britain in 1967, and salmonellosis continued as a serious threat to animal and human health in the United States. However, advances in the study and prevention of hog cholera, canine hip dysplasia, and respiratory disease of cattle, as well as improvements in laboratory animal care, contributed to the betterment of animal health.

Foot-and-Mouth Disease. The most serious epidemic of foot-and-mouth disease in British history occurred in the fall of 1967. Foot-and-mouth disease is a virus-caused disease affecting all cloven-footed animals, causing fever, loss of appetite and weight, and the eruption of blisters on the feet and mouth. In an attempt to prevent the spread of the disease over 320,000 animals were slaughtered. In addition, horse racing and the movement of animals was prohibited, and the Ministry of Agriculture has asked people to curtail their traveling since the disease can be carried on a person's shoes or on automobile tires. (See also GREAT BRITAIN.)

Salmonellosis. Salmonellosis, a bacterial infection affecting the intestinal tract of animals and man, continued to be a serious threat in 1967. According to a survey of almost 13,000 samples selected at 724 feed mills, salmonella was isolated from 5% of the poultry feed samples, 3% of the swine feed samples, and 1% of the cattle feed samples. Salmonella in animal feeds is believed to be an indirect source of the infection in man. Another source is the pet turtle, often handled by children. Control of salmonellosis is largely a sanitation and hygiene problem which is being partly solved by expanded federal and state food inspection programs. Infections can usually be controlled by antibiotics.

Hog Cholera. The state-federal program to eradicate hog cholera continued successfully in 1967. Nine states have already been declared hog cholera-free, and 30 states with more than 62% of the country's swine have advanced to the final phases of the eradication program. A 1972 target date has been set for the entire United States to achieve hog cholera-free status. Britain, whose hog production is equal to that of Illinois, became a hog cholera-free country in 1967.

Hip Dysplasia. In 1967 progress was made in the study of canine hip dysplasia, a disorder of the hip joints of the German shepherd dog and other large dogs. Dog breeders were encouraged by a genetic study reported in the *Journal* of the American Veterinary Medical Association. This study of 236 German shepherd dogs from 38 litters found that hip dysplasia could be substantially reduced by breeding only those dogs free of the disease. On the basis of this and other studies, geneticists concluded that canine hip dysplasia is primarily an inherited condition. Consequently, progeny testing based on radiographic examination of hips and careful selection of dogs free of hip dysplasia for breeding was recommended to reduce the incidence of the disease.

Bovine Respiratory Disease. In June 1967 the U. S. Department of Agriculture and the American Veterinary Medical Association sponsored a symposium at the University of Georgia on "Immunity to the Bovine Respiratory Disease Complex." The most significant work of the symposium was the report of a 17-member panel which evaluated current immunization practices and recommended desirable procedures for safeguarding the health of the nation's cattle. It recommended a program of "preconditioning vaccination" of calves at the ranch where they are raised before they are shipped to feedlots for final fattening for market. Preconditioning involves vaccinating the calves to protect them from infectious bovine rhinotracheitis, shipping fever (parainfluenza-3 virus), brucellosis, bovine viral diarrhea (mucosal disease), and leptospirosis. The panel also strongly urged that the calves be fed amply, protected from inclement weather, and segregated from sick animals.

Laboratory Animal Welfare. Implementation of the Laboratory Animal Welfare Act (PL 89-544) was seriously hampered by lack of funds during 1967, and the U. S. Department of Agriculture had to let dealers certify themselves as complying with the law. Nevertheless, the act has accomplished some of what its proponents hoped it would do. Many new laboratory animal facilities with adequate space have been constructed, and a number of veterinary schools and veterinary associations have developed continuing education programs in the proper health care and handling of laboratory animals. A number of irresponsible dealers have also been forced out of business. The present act provides for the inspection of those facilities for holding, handling, and transporting laboratory animals prior to involvement in research. New bills, notably the Rogers-Javits bill, have been introduced in Congress with the intended purpose of providing inspection of research facilities.

ARTHUR FREEMAN, D. V. M.
American Veterinary Medical Association

CENTRAL PRESS

SLOW
DISENFECTANT
RAMP AHEAD
RAC

FOOT-AND-MOUTH DISEASE struck cattle in England and spread rapidly in the autumn of 1967. Disinfectant barriers were put across many of the roads in an effort to stop the spread of the disease.

VIETNAM

UPI

BLAZING HOUSE in a South Vietnamese village was fired by U. S. troops while hunting Vietcong snipers in February 1967. Woman vainly attempts to douse the flames.

VIETNAM

For the 36 million people north and south of Vietnam's 17th parallel, the war dominated all aspects of life in 1967. Despite this, both countries were able to hold elections. Nguyen Van Thieu became the first elected president of South Vietnam, and the North Vietnamese elected members of the people's councils. (For a discussion of the war, see the next article, VIETNAM WAR.)

SOUTH VIETNAM

The 1967 elections in South Vietnam were part of the "nation-building" process that began in September 1966 with the election of the constituent assembly and that culminated, in October 1967, with elections to the House of Representatives. The new constitution, providing for a presidential form of government, a 2-house legislature, and an independent judiciary, went into effect on April 1, 1967.

Local Elections. South Vietnam's first local elections since 1964 began in April in those areas the government felt were secure from Vietcong reprisals. In the village and hamlet elections that were held between April 2 and June 12, about 980 of the country's more than 2,500 villages participated. Chiefs and deputy chiefs were elected (for 3-year terms) in more than 4,000 of South Vietnam's nearly 14,000 hamlets.

Presidential Election. In the spring of 1967, Premier Nguyen Cao Ky and Chief of State Nguyen Van Thieu announced themselves as candidates for the September 3 presidential election. Desiring to avoid a split in the ranks of the military, the Armed Forces Council forced Premier Nguyen Cao Ky to withdraw from the race and to run for vice president on Thieu's ticket. The junta also prevented the candidacy of the highly popular Duong Van Minh ("Big Minh"), a leader of the 1963 coup against the late president Ngo Dinh Diem. The official reason given for his ineligibility was that his running mate once had been a French citizen.

SOUTH VIETNAM • Information Highlights

Area: 65,948 square miles (170,806 sq km).
Population: 16,543,000 (July 1, 1966 est.).
Chief Cities (1965 est.): Saigon, the capital, 1,485,300; Danang, 228,040; Hue (1964 est.), 103,563.
Government: *President*—Nguyen Van Thieu (elected Sept. 3, 1967); *Premier*—Nguyen Van Loc (appointed Oct. 31, 1967). *Parliament*—Senate, 60 members; House of Representatives, 137 members.
Religious Faiths: Buddhists, 65% of population; Roman Catholics, 10%; others, 25%.
Education: *Literacy rate* (1960), 90% of population. *Total school enrollment* (1964–65)—1,418,900 (primary, 1,263,000; secondary, 123,100; primary teacher-training, 2,200; technical, 8,500; higher, 22,100).
Finance (1967 budget): $658,000,000; *monetary unit,* piastre (118 piastres equal U. S.$1).
Gross National Product (1965): $2,302,000,000.
National Income (1965): $1,828,000,000; average annual income per person, $113.
Cost of Living Index (1966): 232 (1958=100).
Manufacturing (metric tons, 1965): Beer, 1,129,000; cement (1964), 75,000; fuel briquets and packaged fuel, 50,000.
Crops (metric tons, 1965–66 crop year): Rice (1966–67), 4,336,000; sweet potatoes and yams, 278,000; cassava, 236,000.
Minerals (metric tons, 1965): Salt, 95,200; coal, 75,000; clays (1964), 2,062; white sand (1964), 220,000 cubic meters.
Foreign Trade (1965): *Exports,* $35,490,000 (chief export: rubber, $25,510,000); *imports,* $370,500,000 (chief imports, 1965: petroleum products, $12,988,000; cement, $5,581,000; raw sugar, $3,943,000). *Chief trading partners* (1965): U. S. (took 5% of exports, supplied 47% of imports); France (took 34% of exports, supplied 4% of imports); Japan (took 11% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 12,320 miles (19,827 km); *motor vehicles* (1965), 67,487 (automobiles, 34,335); *railways* (1965), 794 miles (1,278 km).
Communications: *Telephones* (1967): 24,837; *radios* (1964), 1,000,000; *newspapers* (1965), 32 (daily circulation, 670,000)

WIDE WORLD

NGUYEN VAN THIEU was elected president of South Vietnam on Sept. 3, 1967, receiving a plurality of 35% of the vote. Thieu had become the front-running candidate in June, when Premier Nguyen Cao Ky agreed under pressure not to seek the presidency and to become Thieu's running mate. During the campaign, Thieu indicated willingness to negotiate with representatives of the Hanoi regime and the National Liberation Front.

Thieu was born on April 5, 1923, in the village of Ninh Chu on the South China Sea. He was educated at the Catholic Pellerin School at Hue. After World War II he served briefly with Vietminh forces under Ho Chi Minh, but in 1948 he joined the French-sponsored Vietnamese national army. Following the establishment of the Republic of Vietnam in 1954, he rose through the ranks of the South Vietnamese army, serving in several command posts. In 1964–65 he was deputy premier and defense minister, and in June 1965 he became nominal chief of state as chairman of the National Leadership Committee.

Thieu and Ky won the election, but by an unexpectedly small margin. The 1,649,561 votes received by them represented only about 35% of the total poll of about 4,700,000. The runner-up was Truong Dinh Dzu, a lawyer, who won 817,120 votes. He advocated direct negotiations with Hanoi and a halt in the bombing of North Vietnam.

Senate and House Elections. The election for the Senate was held on the same day as the presidential election, and that for the House on October 22. The significance of both elections lay simply in the fact that they were held, rather than in their results. Members of the 60-member Senate were chosen for 6-year terms. The leading ticket was a military one, and more than half the new senators were Roman Catholics, although no more than 10% of South Vietnam's almost 17 million inhabitants follow this religion. The two blocs organized by Buddhist monk Thich Tri Quang were disqualified.

The Buddhists were more adequately represented in the 137-member House of Representatives than in the Senate. The Farmers-Workers-Soldiers party of Generals Tran Van Don and Ton That Dinh, the Greater Catholic Solidarity party, and the militant Buddhists were each represented by about a dozen members. President Thieu was inaugurated on October 31 and appointed Nguyen Van Loc premier.

Economy. The war continued to hurt the economy. Agricultural output fell even further, and imports of rice (once an export) had to be increased. About 800,000 tons of rice were imported in 1967, compared with 450,000 tons in 1966. Other foods that had to be imported were chicken and pork. Some industries suffered from a surplus of imports.

Inflation remained a major problem. Prices, which had been fairly stable during the latter part of 1966, rose 35% during the first three quarters of 1967. Economists had predicted that the nation could endure no more than a 30% rise for 1967.

A major factor in this rise was the large amount of money poured into the Vietnamese economy as part of the U. S. war effort. In addition to the military expenditure of about $2 billion a month, the United States spent $688.9 million in South Vietnam during the fiscal year ending June 1967, and this figure was expected to rise in fiscal 1968.

Vietnamese tax collection improved in 1967. Revenues rose nearly 50% during the first nine months because of greater efficiency and the withholding of taxes from salaries. About 56% of the $658 million budget in 1967 was for defense.

Reform. Two of South Vietnam's most pressing socioeconomic problems received less attention during the year than they warranted. The first was the plight of the refugees; the other was land reform. The war created more refugees in 1967 than the South Vietnamese government could handle. By the end of 1967 there were over 2 million refugees in the country. About 900,000 had fled the countryside in 1966, and 500,000 had left in 1967. Efforts to bring about land reform also seemed stalled. In the Mekong delta about 65% of the peasants continued to rent land, with rents continuing as high as 50% of the crop, which is twice the legal limit.

Toward the end of the year the new government increasingly came under attack by both South Vietnamese critics and U. S. officials and observers. Thieu had promised a new draft law that would increase the size of Vietnam's army. However, the new bill was highly unpopular with the Saigon legislature and had not been passed by the end of the year.

Relations with the U. S. South Vietnam and the United States remained close in 1967, athough there were occasional disagreements. Presidents Johnson and Nguyen Van Thieu met in Australia in December and agreed that South Vietnam would speed up economic reconstruction and that both countries would pursue peace.

SOUTH VIETNAMESE REFUGEES, who have been evacuated from their village by American troops, carry their belongings to their new home, a coastal town south of Qui Nhon.

UPI

NORTH VIETNAM • Information Highlights

Area: 61,293 square miles (158,750 sq km).
Population: 19,500,000 (mid-1966 est.).
Chief Cities (1960 census): Hanoi, the capital, 414,620; Haiphong, 182,496.
Government: *President*—Ho Chi Minh (took office July 1954); *Premier*—Pham Van Dong (took office July 1954). *Parliament*—National Assembly, 366 members.
Education: *Literacy rate* (1960), 65% of population aged 12 and over. *Total school enrollment* (1964–65)—2,728,600 (primary, 2,666,000; technical, 35,600; higher, 27,000).
Finance (1967): Budget balanced at $587,000,000; *monetary unit*, dong (2.94 dong equal U. S.$1).
Manufacturing (metric tons, 1965): Cement, 750,000.
Crops (metric tons, 1961): Rice (1964), 4,512,000; sweet potatoes, 990,000; sugarcane (1962), 712,800; cassava, 710,000; maize, 290,000; cotton, 6,200; tea (1960), 2,700.
Minerals (metric tons, 1965): Coal, 3,500,000; apatite, 996,000; salt, 149,700; phosphate rock, 50,000; chromite, 30,000.
Transportation: *Railways* (1960), 485 miles (780 km); *principal airport*, Hanoi.
Communications: *Newspapers* (1965), 4.

Ellsworth Bunker replaced Henry Cabot Lodge as U. S. ambassador to South Vietnam on April 25.

NORTH VIETNAM

The year 1967 was also an election year for North Vietnam. Elections for people's councils at various levels were held in April.

Communist Relations. There were hints during 1967 that North Vietnam was possibly willing to negotiate a settlement of the war, but there also were a number of contrary indicators. President Ho Chi Minh wrote of the goal of a "complete victory" in the "war of national liberation" in South Vietnam, while National Liberation Front (Vietcong) representatives abroad spoke of forming a coalition government in the South. These differences in expressed positions raised the question of whether or not a split in interests existed between Hanoi and the NLF in the south.

Hanoi had the additional problem of keeping on the best of terms with the USSR and Communist China, and at the same time maintaining its independence from them. The delegation Hanoi sent to Moscow in November for the 50th anniversary of the USSR was a senior one, including Le Duan, first secretary of the Vietnamese Workers (Communist) party, and Defense Minister Vo Nguyen Giap. Hanoi also had to prevent the quarrel between China and the USSR from interfering with North Vietnam's receipt of needed supplies. Peking obstructed the flow of arms from the Soviet Union to North Vietnam earlier in the year, but supplies began to move freely again by April.

NEW YORK TIMES

HO CHI MINH greets a delegation of Western clergymen visiting Hanoi in January to discuss the war. Taller figure at left is the noted pacifist A. J. Muste, who died February 11.

Economy. The North Vietnamese economy was badly damaged by U. S. aerial bombardments. One third of the principal port of Haiphong, for example, was destroyed, according to Communist reports. Raids had cut into the country's exports of coal, cement, and pig iron.

Aid from other Communist countries, however, frequently more than compensated for losses. It was reported that the USSR provided about 500,000 tons of cereal grains in 1967 and had increased aid from $300 million in 1965 to $720 million in 1967. Communist China's aid rose from an estimated $110 million in 1965 to $215 million in 1967.

Hanoi claimed that there had been "increased labor productivity" of 40% to 100% by workers in many industrial establishments, although much economic activity was performed at night because of the daytime bombing raids by the United States. Foreign reporters wrote that the bombing had the effect of strengthening North Vietnam's will to resist. (See also ASIA.)

RICHARD BUTWELL
University of Kentucky

HO CHI MINH, president of North Vietnam, reaffirmed in 1967 his country's determination to fight until victory against what he termed "aggression" against the Vietnamese people by the United States and its allies. He refused peace overtures that failed to carry as preconditions an end to U. S. bombing raids on the North and withdrawal of U. S. forces from South Vietnam.

Ho was born in Nghe An province, central Vietnam, probably on May 19, 1890. A founding member of the French Communist party, he was trained in Moscow in the 1920's. During World War II he organized the Vietminh to fight the Japanese invaders and worked for a time with U. S. forces. After the war he proclaimed the Democratic Republic of Vietnam, claiming sovereignty over the entire country, and conducted an 8-year war against the French that culminated in the division of Vietnam under the Geneva agreement of 1954. Ho's support of antigovernment Vietcong guerrilla forces in the South since the late 1950's brought him increasingly into conflict with the United States.

VIP, FROM BLACK STAR

VIETNAM WAR

Spent by the fury of battle, two U. S. soldiers pause for a moment with their thoughts at the summit of Hill 875.

UPI PHOTO BY KYOICHI SAWADA

VIETNAM WAR

By any measurement, the Vietnam War was escalated in 1967. By December there were more than 475,000 U. S. troops in South Vietnam, which was a greater number than at the peak of the Korean War in 1953, when 472,800 American military personnel were involved. This was an increase of slightly less than 100,000 over December 1966. The 10,000 U. S. paratroopers who arrived in December 1967 were part of the 45,000 or more troops promised by President Johnson in August, which would increase U. S. military strength in the country to about 525,000 men by June 1968.

ESCALATION OF THE WAR

Australia more than quadrupled its fighting forces in Vietnam during the year, from 1,700 to 8,000 men. A 2,000-man Thai contingent arrived in mid-September, and it was subsequently announced that Thailand would increase its contribution fivefold in the future. Other foreign forces in South Vietnam included 45,000 South Koreans, 2,200 Filipinos, and 545 troops from New Zealand. In addition, there were approximately 40,000 U. S. naval personnel on ships off the Vietnamese coast and another 35,000 to 40,000 American forces in nearby Thailand—many of them flying air missions against the Communists. South Vietnam's own military forces totaled 622,000.

Increased Bombing Raids. The main escalation of the war, however, was not in numbers of U. S. or other forces but in the air war against North Vietnam. Targets were attacked in 1967 that were previously forbidden—including the military airbases protecting Hanoi and Haiphong, factories almost in the heart of these two cities, and the northeast rail line as far north as a minute's flying time from the Communist Chinese border.

This escalation of the air war clearly failed to attain its proclaimed objective of forcing the Communist government in Hanoi to withdraw forces it had sent south to fight the anti-Communist Saigon regime. Indeed, the North Vietnamese markedly escalated their own ground operations just south of the demilitarized zone separating the two Vietnams, forcing a major and unanticipated redeployment of U. S. forces in South Vietnam. There were conflicting reports respecting the number of Communist forces in the south, however. Communist strength was variously said to have dropped from 285,000 to 242,000 men (North Vietnamese and Vietcong combined)—the official estimate—and to have increased to possibly as high as 320,000. In December, U. S. officials privately estimated enemy political and military manpower in the South at above 400,000.

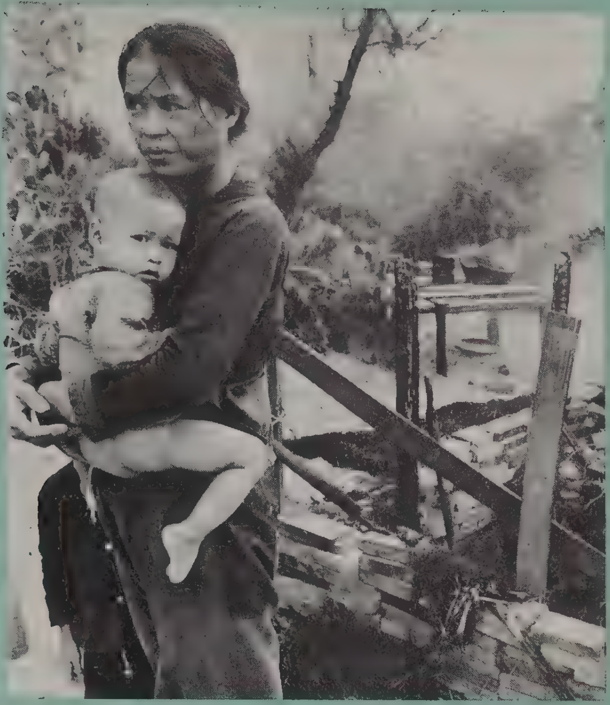
Aid to North Vietnam. Soviet and Communist Chinese aid to the North Vietnamese was also increased. Soviet assistance to Hanoi, which amounted to $300 million in 1965 and $520 million in the following year, jumped in 1967 to an estimated $720 million (more than two thirds of this being direct military aid). China's help rose from $110 million in 1965 and 1966 to about $215 million in 1967, about two fifths of this in military assistance. According to Defense Secretary Robert S. McNamara, such assistance frequently more than compensated for bombing losses suffered as a result of U. S. air activity.

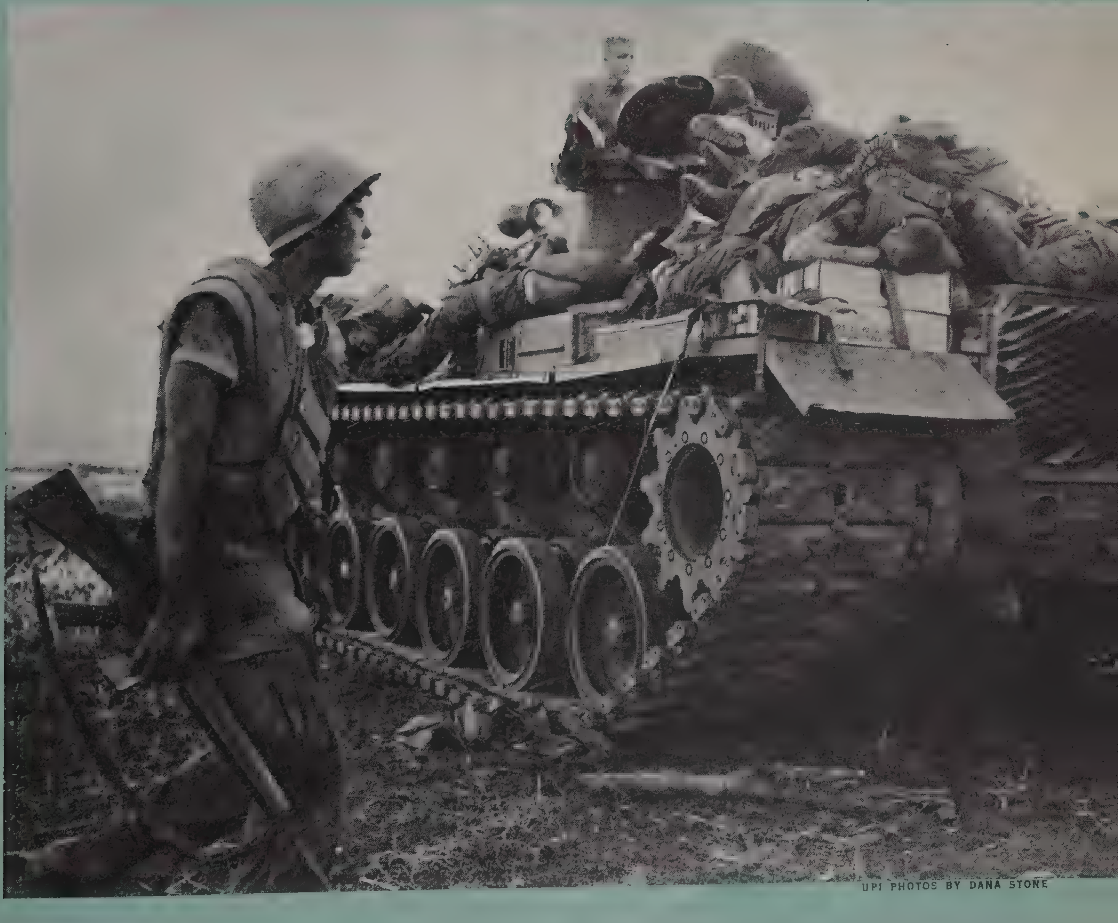
By the end of 1967, North Vietnam—and the allied Vietcong—were clearly feeling the pressure of U. S. and Allied military activity. But they were still fighting—fighting well—and showing no signs of giving up. A joint Soviet-North Vietnamese communiqué issued in September pledged considerably augmented Russian aid to Hanoi in 1968.

THE FIGHTING

General Westmoreland said in Washington in November that U. S. and South Vietnamese forces were "winning a war of attrition." There was evidence both to support and to dispute this assessment.

For two victims of the Vietnam War (*right*), beside the ashes of their home, the future is bleak and uncertain. For some U.S. Marines (*below*), laid atop a tank at Con Thien, the final battle has been fought.





UPI PHOTOS BY DANA STONE

UPI PHOTO BY ROBERT HODIERNE

WAR'S ANCIENT HORROR suffuses the faces of these Vietnamese peasants during fire fight near Bong Son on March 21. The women and little boy sought refuge in a ditch as the battle raged.

Enemy Attacks and Losses. Attacks by enemy groups of battalion size (or larger) were fewer in 1967, and when U. S. and Communist Vietnamese units of this size met, the ratio of enemy to friendly troops killed was higher at the year's end than at any previous time except the late summer of 1966. Enemy losses per month during the year reportedly averaged 13,000 killed, captured, or defected—with probably 2,000 additional casualties and unreported desertions each month. The number of Communist defectors, which early in 1967 seemed likely to be double those of 1966, later leveled off to a monthly average of 2,083, compared with 1,385 the previous year. Vietcong recruitment was also reported to be drastically off, being half what it was in 1966 (3,600 new men a month as contrasted with 7,500 per month a year earlier). Infiltration from the North was down, too, from a peak of 14,000 in June 1966 to a monthly average of 5,500 in 1967.

The drop in the number of attacks initiated by Vietcong and North Vietnamese troops beginning early in 1967 was regarded by U. S. military authorities as particularly significant. The anticipated "winter-spring offensive," expected to begin in late October, did not start on the same scale as in the past. Even ordinarily skeptical newsmen were surprised at the seeming desperation and fanaticism with which the Communists attacked in such battles as those at Locninh (October 29–November 3) and Dakto (November 3–23).

At the end of January 1968, Vietcong troops launched concerted and widespread attacks on South Vietnamese population centers, including Saigon itself. Although Vietcong casualties were reported to be high, and the U. S. command held that the offensive was without military significance, many observers felt that the Vietcong thrusts had diminished Allied prestige.

U. S. Air Raids. Stepped-up American bombing in October-November pushed U. S. war bombing tonnage in Vietnam over the total of 1,554,463 tons dropped by U. S. forces in the German theater in World War II. The U. S. Air Force and Navy had dropped 1,630,500 tons of bombs on North and South Vietnam by mid-November. That was more than four times the tonnage of bombs dropped by the United States in the Korean War and over three times that dropped in the Pacific theater during World War II.

This bombing took its toll. The Communists themselves admitted that Haiphong was one-third destroyed and that all power stations that existed in North Vietnam before the start of U. S. bombing in February 1965 had been knocked out. Defense Secretary McNamara questioned, however, whether such destruction had moved the war any closer to a conclusion when he told a Senate subcommittee in August that nothing short of sustained bombing of civilian centers would force the North Vietnamese into submission. There was no evidence that the United States was likely to resort to such a policy.

The War in the South. The war's toll was high south as well as north of the 17th parallel that divides the country. According to South Vietnamese hospital statistics, approximately 24,000 civilians died in the south in 1967 as a result of the war, and another 76,000 were wounded. Coupled with the widely reported failure of South Vietnam's "other war" (the "strategic revolutionary development" or "pacification" program), the war's increasing cost to the Vietnamese people probably underlay the gloom about the popular mood in the country reported in an official U. S. government document circulated in Saigon in December.

Secretary McNamara stated in August that the frequently reorganized and renamed pacification program, now called "Civil Operations for Revolutionary Development Support," was "going very slow." Fear of the Vietcong, desertions, and inadequate training were among the reasons for what most U. S. newsmen in Vietnam called the "failure" of the program—notwithstanding the optimistic claims of U. S. pacification aide Robert W. Komer in December.

Komer's report paralleled the claim of U. S. Ambassador Ellsworth Bunker in Washington in November that 67% of the Vietnamese people had been brought under government control. Saigon-based press critics of the conduct of the war generally maintained, however, that this optimistic assessment was by no means wholly supported by their own surveys of some hamlets in key categories of the government's elaborate classification of the country's 12,537 hamlets.

Cost to the United States. The price paid by the United States for such progress as was registered in 1967 was a high one—9,353 American servicemen were killed in Vietnam in 1967. (In addition, 11,135 South Vietnamese soldiers lost their lives during the year.) The number of Americans who died in 1967 was greater than the combined total of the six previous years of the war. A total of 15,997 Americans lost their lives in Vietnam from Jan. 1, 1961, to the end of 1967.

The cost of the war was a high one for the United States in material respects, too. War expenditures per month in 1967 were in excess of $2 billion. The Defense Department revealed in December that nearly 3,000 U. S. planes and helicopters, valued at more than $3 billion, had been lost to date in the Vietnam War. Air combat losses increased markedly in August and continued at the same level through the rest of the year as a result of stepped-up North Vietnamese launchings of surface-to-air missiles in the Hanoi-Haiphong complex.

DIPLOMATIC DEVELOPMENTS

Harrison Salisbury of the New York *Times* reported from Hanoi in January that North Vietnamese Premier Pham Van Dong told him that his government's 4-point program for ending the war was a "basis of settlement of the Vietnam problem" rather than a "precondition for negotiations" (as previously indicated). In the year that followed there were numerous indications that the Vietnamese Communists were really interested in negotiations, and there were seemingly equally numerous indications that they were not. In any event, negotiations failed to develop.

U. S. Probes. The United States directed several messages to Hanoi through the two nations' embassies in Moscow early in the year, and President Johnson sent a personal letter to North Vietnamese President Ho Chi Minh in February. Americans Harry S. Ashmore and William C. Baggs, representing the Center for the Study of Democratic Institutions in Santa Barbara, Calif., talked with Ho in January. They reported to U. S. officials in Washington that the Communist leader might be willing to impose some restraint on military operations if the Americans halted their bombing to get talks under way, and they helped to write an official conciliatory letter of inquiry to Ho. Ashmore and Baggs subsequently claimed that Johnson's February letter to Ho—allegedly harsher in tone—canceled the effect of the earlier note.

International Peace Efforts. Soviet Premier Aleksei Kosygin, who met with British Prime Minister Harold Wilson early in the year, reportedly tried to work out an arrangement with the latter whereby both the United States and North Vietnam would reduce their military activity. In June, Kosygin talked with President Johnson at a hastily improvised summit session at Glassboro, N. J.

Kosygin later reiterated his support for the terms stated by North Vietnam and the Vietcong—cessation of U. S. bombing, withdrawal of American forces from South Vietnam, and Washington's recognition of the Vietcong as "the sole genuine representative of the people of South Vietnam." A Tokyo newspaper reported later in the year that Kosygin told visiting Japanese Foreign Minister Takeo Miki that he would seek to mediate in the war if the United States would only unconditionally halt the bombing of North Vietnam for a period long enough for Hanoi to respond to such a step.

UPI PHOTO BY FRANK JOHNSTON

CRADLING a wounded comrade, U. S. Marine anxiously awaits an evacuation helicopter after capture of Hill 881.

UN Secretary-General U Thant, who met with North Vietnamese representatives in Burma early in the year, repeatedly asserted that a bombing halt was an essential step toward peace in Vietnam and that he was "convinced" that, if the bombing were stopped unconditionally, peace talks would begin in three to four weeks. Canada, Denmark, Sweden, France, Somalia, Indonesia, Kenya, and several other nations, friendly and otherwise, offered similar assessments at the annual fall session of the UN General Assembly. President Johnson, however, unconvinced that the Vietnamese Communists really sought peace, said in November that there would be no halt in the bombing.

OPPOSITION TO THE WAR

Domestic opposition to U. S. participation in the Vietnam War increased in 1967. There was an upsurge in both demonstrations and petition movements, but perhaps most important were the growing alienation between Congress and the President and the reflection of popular discontent in public opinion polls.

Political Reaction. The Johnson administration's Vietnam War policies may have divided the Democratic party more deeply than any issue since the Southern revolt against President Truman's civil rights proposals in 1948. What appeared to be a consensus in the Congress in support of the President at the start of 1967 had clearly been eroded by the year's end. "Dovishness" had increased considerably, while the "hawks," who felt the President was not going all out to win the war, had become more "hawkish." In general, however, sentiment was increasing for less military action and more negotiation. Democratic Sen. Eugene J. McCarthy of Minnesota, an avowed challenger to President Johnson for the 1968 Democratic presidential nomination, was becoming by the end of the year a leading spokesman for critics of the administration's Vietnam War policy.

UPI PHOTO BY FRANK JOHNSTON

BATTLE-WEARY U. S. Marines find refuge in a church in An Hoa, May 5, during a North Vietnamese mortar attack.

McNamara's Resignation. The surprising revelation in November that Defense Secretary McNamara would leave his post to become head of the World Bank was related by some observers to the whirling domestic controversy concerning the conduct of the war. At the year's start, U. S. bombing of North Vietnam had been limited to supply lines to the South, and McNamara opposed inauguration, in the spring, of sustained raids against rail and industrial targets in the northeastern part of the country. He also opposed the authorization of bombing targets closer to the Chinese border in mid-1967.

President Johnson in both instances decided in favor of those who endorsed such escalation—the Joint Chiefs of Staff and congressional "hawks" such as Senators Stuart Symington and John Stennis. Not all professional soldiers supported the President's conduct of the war, however. Gen. Lauris Norstad, former NATO supreme commander; Gen. Matthew Ridgway, former Army chief of staff, and Gen. James M. Gavin (ret.) were among the military men who criticized Johnson's Vietnam policies.

Public Opposition. The public also took increasing exception to the President's policies. A Gallup poll released in October showed that 57% of the participants disapproved of the President's conduct of the war. A Harris poll published about the same time showed 58% of those polled supporting the war, as contrasted with 72% in July and 61% in August. The drift of both public opinion and congressional sentiment, particularly among Republicans, was clear enough. Its likely effect on the war, however—and on the 1968 elections—was far from clear. Escalation proceeded as sentiment for it declined, and the President took a stronger stand as his critics increased in both number and visibility.

(For further military details, see Air Force; Army; Marine Corps; National Defense; Navy. For general discussions on the war, see Asia; Foreign Policy of the U. S.; United Nations; United States; Vietnam.)

Richard Butwell
University of Kentucky

VIRGIN ISLANDS

In 1967 the Virgin Islands observed the 50th anniversary of the formal transfer (March 31, 1917) of the territory from Denmark to the United States. Year-long semicentennial observances placed thematic emphasis on 50 years of social and economic progress under the U. S. flag. Because strong ties still exist between the islands and Denmark, commemorative events throughout the year also reaffirmed the territory's Danish heritage.

Governors' Conference. The Virgin Islands hosted the 59th annual National Governors' Conference (October 16–24) under an arrangement featuring a conference aboard the liner *Independence* from New York City, with events ashore in St. Thomas and St. Croix.

Tourism. Tourist-derived revenues reached an all-time high during the year, with tourist spending recorded at approximately $75 million. Visitors numbered more than 500,000, causing concern for long-range planning to accommodate still larger numbers in the coming jumbo-jet age. The government continued to formulate plans for development of a new airport in St. Thomas capable of accommodating the larger aircraft of the future.

Cornell University's School of Hotel Administration completed its survey of the islands' tourist facilities in 1967, resulting in hostelers' enthusiastic interest in implementing the suggestions presented in the study for upgrading services. New hotel construction included a luxury-type resort complex on St. Croix and many smaller guest-house facilities on all the islands.

Oil Agreement. In December the U. S. secretary of the interior approved a 15,000-barrel-a-day finished petroleum products import allocation for the Hess Oil Virgin Islands Corp. operation on St. Croix, permitting the shipment of such products to the U. S. mainland. The secretary also endorsed an agreement between Hess and the Virgin Islands government whereby the islands would receive approximately $2,700,000 a year from Hess as royalties based on the allocation.

Ernest C. Downing, Jr.
Special Assistant to the Governor
of the Virgin Islands

VIRGIN ISLANDS • Information Highlights

Area: 133 square miles (214 sq km); (St. Croix, 82 sq mi; St. Thomas, 32 sq mi; St. John, 19 sq mi).
Population: 60,000 (1967 est.).
Chief City: Charlotte Amalie (St. Thomas), the capital, 12,880 (1960).
Government: Governor, Ralph M. Paiewonsky (Presidential appointee). *Territorial Legislature,* 15 members.
Education (1965): *Public schools,* 11,398; parochial and private schools, 4,800; college, 1,046 (course enrollment).
Finance (fiscal year 1967): *Revenues,* $41,745,719; *expenditures,* $40,149,215 (health, $7,185,549; education, $7,302,179; public works, $6,546,575).
Foreign Trade and Tourism (1967): *Exports,* $56.2 million; *imports,* $137 million; tourist spending, $75,035,860.
Transportation and Communication: *Motor vehicles* (1965), 13,100; *telephones* (1967), 10,558.

VIRGINIA

In sharp contrast to the dramatic turbulence of recent years, Virginia's political seas subsided into relative calm during 1967. The November elections for the General Assembly left Democrats in overwhelming control of both houses.

During the year, two veteran conservative Democrats of the old Byrd organization, Speaker of the House of Delegates E. Blackburn Moore and Congressman (former Governor) William M. Tuck, announced plans to retire, thus furthering the trend toward moderation within the Democratic party. This trend was symbolized most dramatically by the election to the House of Delegates of Dr. William Reid, a Richmond Negro, the first of his race to sit in the Virginia legislature since 1891.

General Assembly Elections. The pre-election campaign for the General Assembly generated few issues and little voter interest—in spite of the fact that Republicans fielded candidates in approximately half the contests, an unusually high number. Some Republican candidates criticized various aspects of the sales and auto titling taxes passed by the 1966 Assembly. Gov. Mills E. Godwin led the Democrats in defending the taxes, reproaching the Republicans for advocating increased expenditures without supporting increased revenues. Republicans charged various Democratic officeholders, especially State Highway Commissioner Richard Holland, with "conflict of interest" between private business and public responsibilities. Partly because of Republican pressure, Godwin dismissed Commissioner Holland on September 7.

Republicans also attempted to win votes by capitalizing on anti-Johnson sentiment among some Virginians, arguing that a vote for state Democrats amounted to an endorsement of the national administration. Democrats argued that national politics had no relevance to state issues.

In the election results, the Republicans increased their strength from 4 to 6 seats in the 40-member Senate and from 12 to 14 seats in the 100-member House of Delegates. Republican charges of mail-ballot fraud in the southwestern part of the state produced some official investigations but no reversal of electoral verdicts. Governor Godwin claimed that the election results vindicated his "program of progress."

Hahn Commission Report. After the November elections the Hahn Commission, a study group authorized by the state to recommend new methods for coping with urban problems, released its report. The report advocated that metropolitan areas set up a new level of regional government designed to handle public functions of area-wide concern. State journals generally lauded the document's proposals as original and constructive, but most politicians reserved comment. The report promised to serve as a springboard for controversy during the 1968 session of the Assembly.

Education. Educationally, the most significant development of the year was the rapid growth of Virginia's community college system, first authorized by the 1966 General Assembly. A master plan released in January 1967 projected the establishment by the 1975–78 period of 22 new colleges, with an anticipated enrollment of over 100,000 students.

Race Relations. Virginia did not share in the major racial violence experienced by many areas of the nation in 1967. Integration proceeded rapidly in public schools, and by the fall term few traces remained of the dual system in localities west of the Blue Ridge. After a struggle with federal officials, the state's system of mental hospitals was also thoroughly integrated during the year.

Economy. Virgina continued to share in the general national prosperity. The unemployment rate was among the lowest of all the states. The vast majority of the state's population growth continued to concentrate along the "urban corridor" from Arlington and Alexandria through Richmond to Norfolk. Early in the year, Governor Godwin led a delegation of Virginians to Italy, Sweden, and other European nations in search of markets for Virginia exports.

A seven-day strike in July tied up the Newport News Shipbuilding and Dry Dock Company, the world's largest shipbuilder and Virginia's largest employer. Labor riots and clashes with police led to the calling in of state troopers. The suspension of three workers had touched off the strike on July 10. Governor Godwin scheduled mediation talks at his office in Richmond, and the dispute was settled and the strikers returned on July 17.

William Larsen
Radford College

VIRGINIA • Information Highlights

Area: 40,815 square miles (105,711 sq km).
Population: 4,533,000 (July 1, 1967 est.).
Chief Cities (1967 est.): Richmond, the capital, 216,456; Norfolk, 309,788; Arlington, 183,000; Virginia Beach, 145,843; Newport News, 133,697; Portsmouth, 117,891.
Government: *Chief Officers*—governor, Mills E. Godwin, Jr. (Democrat); lt. gov., Fred G. Pollard (D); secy. of state, Martha Bell Conway (D); atty. gen., Robert Y. Button (D); treas., Lewis H. Vaden; supt. of pub. instr., Woodrow W. Wilkerson; chief justice, John W. Eggleston. *Legislature*—General Assembly (convened Jan. 1966): Senate, 40 members (6 Republicans, 34 Democrats); House of Delegates, 100 members (15 R, 84 D, 1 Independent).
Education: *School enrollment* (1965–66)—public elementary, 679,000 pupils (23,693 teachers); public secondary, 356,000 pupils (17,157 teachers); nonpublic schools, 62,600 pupils (2,740 teachers); higher (fall 1965), 91,696 students. *Public school expenditures* (1965–66)—$380,500,000 ($415 per pupil); average teacher's salary, $5,650.
Public Finance (fiscal year 1965–66): *Revenues*, $1,080,884,503 (individual income tax, $164,053,852; motor fuel tax, $116,584,008; federal funds, $231,831,206). *Expenditures*, $1,041,497,786 (education, $349,445,583; health, welfare, and safety, $84,558,023; highways, $336,515,488).
Personal Income (1966): $11,641,000,000; average annual income per person, $2,605.
Public Assistance (fiscal year 1967): $38,943,710 to 75,437 recipients (aged, $11,375,280; dependent children, $17,551,973).
Labor Force (employed persons, August 1967): *Agricultural*, 102,400; *nonagricultural* (wage and salary earners), 1,340,000 (25.2% manufacturing, 20.8% trade, 19.7% government). *Unemployed persons* (August 1967)—44,600.
Manufacturing (1966): Value added by manufacture, $3,795,221,000 (chemicals and allied products, $755,165,000; primary metals, $92,871,000; nonelectrical machinery, $126,530,000; electrical machinery, $224,990,000.
Agriculture (1966): *Cash farm income*, $524,164,000 (livestock, $281,932,000; crops, $224,620,000; govt. payments, $17,612,000). *Chief crops* (tons)—sweet potatoes, 95,000 (ranks 3d among the states); hay, 1,356,000; corn for grain, 547,400; potatoes, 198,500; soybeans, 183,900.
Mining (1966): *Production value*, $274,297,000. *Chief minerals* (tons)—bituminous coal, 35,565,000; stone, 34,151,000; sand and gravel, 17,191,000; clays, 1,486,000.
Fisheries (1966): *Commercial catch*, 417,622,657 pounds ($21,004,363). *Leading species*—menhaden, 272,390,531 pounds ($4,332,279); hard blue crabs, 63,732,322 pounds ($3,621,797); alewives, 28,534,821 pounds ($488,029).
Transportation: *Roads* (1967), 56,877 miles (91,515 km); *motor vehicles* (1967), 2,001,534; *railroads* (1967), 4,435 track miles (7,136 km); *airports* (1967), 12.
Communications (1967): *Telephones*, 1,914,500; *television stations*, 27; *radio stations*, 184; *newspapers*, 32 (daily circulation, 1,155,061).

VITAL STATISTICS. See Death Rates; Marriage and Divorce; Population; Public Health.

VORSTER, Balthazar Johannes. See biographical sketch under South Africa.

WALLACE, George C.

Former governor of Alabama: b. Clio, Ala., Aug. 25, 1919.

The year 1967 witnessed the rise of a third party presidential candidate—George Corley Wallace of Alabama. Wallace served as governor of Alabama from 1963 to 1967, following previous political experience as a state legislator and a circuit judge. Unable to succeed himself under Alabama law, Wallace was instrumental in the election of his wife, Lurleen, as governor in 1966—a victory that assured the continuation of his own policies.

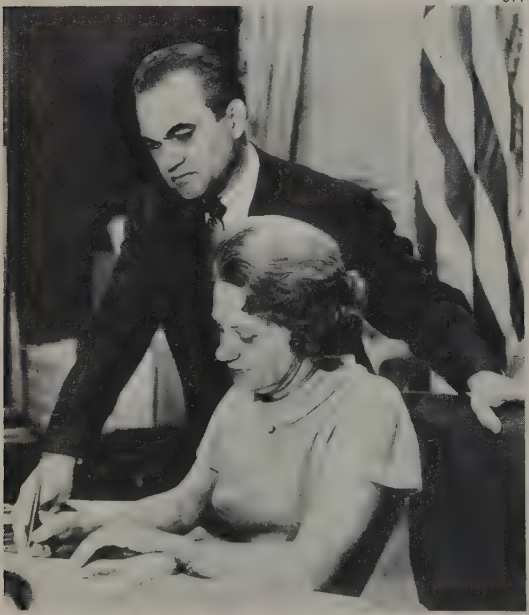
Early in 1967, Wallace gave strong indications that he intended to be a serious factor in presidential politics. The tone of his campaign was set in a speech at Syracuse University on April 26, at the start of a major speaking tour, when he declared that "if the major political parties don't give the people a choice, the people are going to run over a lot of politicians." In 1964 he had demonstrated surprising electoral strength in a number of Democratic presidential primaries. His campaign, centered around opposition to civil rights legislation, drew 25% of the votes in Wisconsin, 30% in Indiana, and 43% in Maryland.

A strong and tireless campaigner, Wallace gave speeches in more than 20 states during 1967, addressing such mass audiences as businessmen and college students. His campaign, carried on under the banner "Stand Up For America," was strongly oriented toward the dissatisfaction of "the man in the street" with recеent social developments and with the role of the federal government. Wallace denounced intellectual elitism and advocated that control of "domestic institutions" (such as schools, hospitals, labor unions, and private property) be returned to the people.

While disavowing any intention of disparaging the rights of people because of racial, religious, or ethnic factors, Wallace was highly critical of the role of the federal judiciary and bureaucracy in the affairs of states and localities. Appearing on a national television program on October 29, he advocated the use of force to quell riots. He has also been vehement in his denunciation of demonstrations against the war in Vietnam.

GEORGE C. WALLACE, the third party presidential candidate of 1968 and former governor of Alabama, is pictured with his wife, Lurleen, who succeeded him as governor.

UPI



The Wallace campaign was frankly aimed at cutting into the strength of both major political parties and exerting leverage on the electoral college with the hope of throwing the presidential election into the House of Representatives. His efforts were given a major boost in December when petitions in California obtained well in excess of the 66,059 names necessary to put his American Independent Party on the California ballot. On Feb. 8, 1968, he formally announced his candidacy in Washington, D. C.

Robert J. Frye
University of Alabama

WASHINGTON

In 1967 the Boeing Company (Washington's largest industrial employer) received federal government contracts of more than $1 billion for construction of prototypes of the Boeing 2707. The design had been chosen on Dec. 31, 1966, as the U. S. commercial supersonic air transport (SST) for the mid-1970's. Other news was made by the longest legislative session (112 days) in Washington's history.

WASHINGTON • Information Highlights

Area: 68,192 square miles (176,617 sq km).
Population: 3,089,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Olympia, the capital, 18,900; Seattle, 565,000; Spokane, 184,000; Tacoma, 152,000; Everett, 50,500; Yakima, 44,200; Bellingham, 35,200; Vancouver, 35,200.
Government: *Chief Officers*—governor, Daniel J. Evans (Republican); lt. gov., John A. Cherberg (Democrat); secy. of state, A. Ludlow Kramer (R); atty. gen., John J. O'Connell (D); treas., Robert S. O'Brien; supt. of pub. instr., Louis Bruno; chief justice, Robert C. Finley. *Legislature* (convened Jan. 9, 1967)—Senate, 49 members (20 Republicans, 29 Democrats); House of Representatives, 99 members (55 R, 44 D).
Education: *School enrollment* (1965–66)—public elementary, 407,600 pupils (15,100 teachers); public secondary, 331,400 pupils (13,000 teachers); nonpublic schools, 63,400 pupils (2,520 teachers); college and university, 109,579 students. *Public school expenditures* (1965–66)—$380,000,000 ($556 per pupil); average teacher's salary, $6,825.
Public Finance (fiscal year 1965): *Revenues,* $1,159,188,000 (total sales and gross receipts tax, $488,400,000; motor fuel tax, $83,451,000; federal funds, $205,369,000). *Expenditures,* $1,100,590,000 (education, $401,756,000; health, welfare, and safety, $193,073,000; highways, $196,611,000).
Personal Income (1966): $9,797,000,000; average annual income per person, $3,222.
Public Assistance (fiscal 1967): $135,700,000 to 114,000 cases (aged, $34,945,000; dependent children, $42,226,000).
Labor Force (employed persons, Aug. 1967); *Agricultural,* 84,100; *nonagricultural* (wage and salary earners), 1,057,400 27% manufacturing, 21.8% trade, 19.4% government). *Unemployed persons* (Aug. 1967)—49,500.
Manufacturing (1965): Value added by manufacture, $3,179,104,000 (transportation equipment, $995,379,000; primary metals, $244,147,000; machinery, $132,133,000; fabricated metals, $92,683,000; food and products, $383,542,000).
Agriculture (1966): *Cash farm income,* $776,111,000 (livestock, $257,160,000; crops, $469,374,000; govt. payments, $49,577,000). *Chief crops* (tons)—apples, 792,000 (ranks 1st among the states); pears, 140,500 (rank, 3d); hops, 18,500 (rank, 1st); wheat, 2,707,300; hay, 2,232,000; sugar beets, 1,300,000; potatoes, 1,052,000.
Mining (1966 est.): *Production value,* $85,592,000. *Chief minerals* (tons)—sand and gravel, 30,000,000; stone, 12,400,000; clays, 163,000; coal, 55,000; zinc, 24,362.
Fisheries (1966): *Commercial catch,* 138,553,766 pounds ($21,375,396). *Leading species*—salmon, 32,223,225 pounds ($10,722,997); halibut, 8,198,462 pounds ($2,940,333); bottomfish, 52,968,210 pounds ($3,158,330).
Transportation (1967): *Roads,* 72,955 miles (117,385 km); *motor vehicles,* 1,734,543; *railroads* (1966), 5,918 line miles (9,524 km); *airports with scheduled services,* 11.
Communications (1967): *Telephones,* 1,597,500; *television stations,* 13; *radio stations,* 135; *newspapers* (1966), 24.

The Boeing 2707. The federal contracts signed on May 1 are for construction of two prototypes of the commercial supersonic transport (SST) plane. They cover development of the 1,800-mph, movable-wing craft through June 1, 1971. Target dates were set for the first roll-out by September 1970 and for flight testing by December of that year.

Legislation. The 1967 legislature devoted major attention to education, urban affairs, and conservation, while managing once again to avoid tax and constitutional reform. In education, the lawmakers created a system of community colleges separate from the systems controlled by common school boards and regents of higher education, as well as a new 4-year college to be located on Puget Sound.

In urban affairs, the legislature passed several measures designed to make it easier for counties and communities, usually in concert with neighboring areas, to undertake joint community service projects such as cultural centers, ball parks, and transportation and utility services. Counties were authorized to double their bonding capacities, and an office of community affairs was created, under the governor, to coordinate joint community efforts.

The legislators also passed a fair-housing act, making it illegal for a real estate dealer to discriminate on grounds of race or creed. But opponents of the act succeeded in placing the question on the ballot in the general elections of 1968.

As a result of newspaper disclosures of abuses in the insurance industry, the legislature produced 13 separate bills dealing with insurance reforms. The most important was a bill to require insurance companies to spell out in the policies the specific grounds for policy cancellation.

Separate "clean waters" and "clean air" acts were passed. The first increased the power of the state pollution control commission to enforce water use standards, and the second permitted counties to establish air pollution control authorities.

Heeding the recommendations of his tax advisory council, Gov. Daniel J. Evans proposed a single-tax personal income tax to reduce the reliance on sales and business and occupation taxes. Although the proposal was alive until the last two days of the session, its proponents failed by only two votes to put the issue to the voters in the form of a constitutional amendment, as would be required for an income tax in Washington.

A similar fate befell a proposal to rewrite the constitution of the state of Washington. The plan never emerged from a Senate committee, despite strong urging by the governor, the attorney general, and civic groups.

Copper Mine Controversy. Continuing controversy centered around plans of the Kennecott Copper Corporation for an open-pit mine near Glacier Peak in the Glacier Peak Wilderness Area. Although the Wilderness Act of 1964 permits mining of previously existing claims until 1984, strong opposition to the mine developed among conservation groups and various federal and state government agencies.

WARREN W. ETCHESON
University of Washington

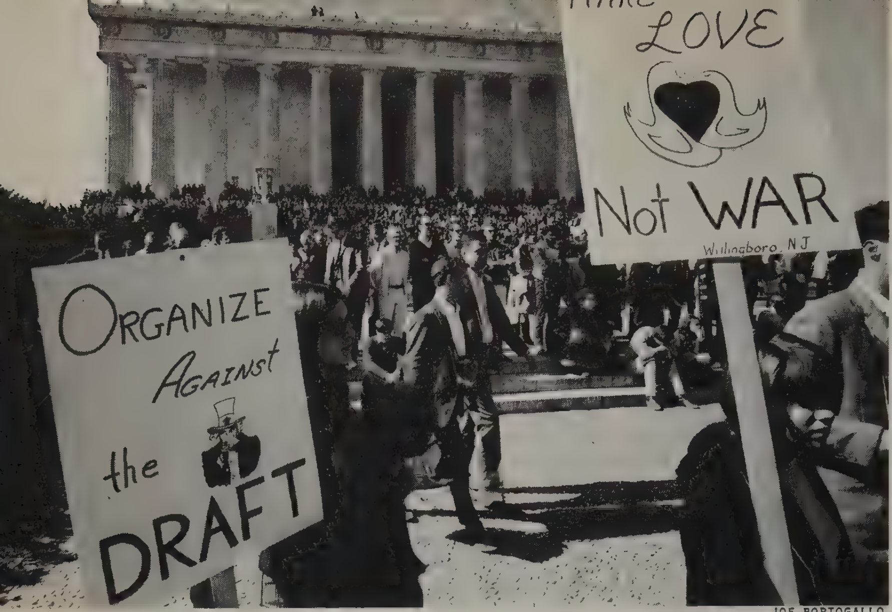
WASHINGTON (DISTRICT OF COLUMBIA)

For the District of Columbia, the nation's capital as well as the central city of one of the fastest-growing metropolitan areas in the nation, 1967 was a historic year. It brought to an end the city's commissioner form of government and inaugurated a new era of modified home rule.

Government. Since 1874, Washington had been ruled by a three-man Board of Commissioners appointed by the U. S. President, with Congress exercising sole legislative power. In August 1967, after years of controversy, Congress approved a mayor-council government for Washington, with officials nominated by the President and approved by the

NEW MAYOR of Washington, D. C., Walter Washington (*second from right*), is greeted by (*from left*) Housing Secretary Robert Weaver and Mayors Carl B. Stokes (Cleveland) and Richard G. Hatcher (Gary, Ind.).

UPI



WASHINGTON is the scene of antiwar demonstrations on October 21, as marchers leave Lincoln Memorial on their way to the Pentagon.

JOE PORTOGALLO

Senate. In September, Walter E. Washington and Thomas W. Fletcher were appointed mayor and deputy mayor, respectively (the head of the new government was officially listed as "commissioner," but was addressed by everyone as "mayor"). Appointees to the City Council, named in November, were John W. Hechinger, chairman, the Rev. Walter E. Fauntroy, vice chairman, Stanley J. Anderson, Margaret A. Haywood, John A. Nevius, William S. Thompson, J. C. Turner, Polly Shackleton, and Joseph P. Yeldell. The new mayor and five of the nine council members chosen to represent Washington are Negroes, as are an estimated 65% of the city's population of 810,000.

Mayor Washington was told by President Johnson to act as though he were an elected official and to consult directly with the White House. Nevertheless, the new government was clearly a compromise. The officials were not elected, and the only clear power that Mayor Washington had that the earlier commissioners did not have was that of reorganizing the city government. Even that power is subject to review, in fiscal matters, by Senate and House subcommittees on District appropriations. However, the new government has given Washington citizens a greater sense of participation in city affairs.

Mayor Washington moved quickly toward efficiency and economy within the Washington bureaucracy. Two "super department heads"—Patrick V. Murphy and Thomas Appleby—were appointed to speed coordination of the critical public safety and housing programs, respectively. Plans for consolidating related recreational, educational, and library programs, as well as citizen advisory groups, were being studied.

Despite congressional approval of its first budget of over a half-billion dollars ($500,954,300), the new municipal government faced urgent financial problems. A boost in real estate taxes from $2.60 to $3.00 per 100 assessed valuation and a 10% increase in personal property (business inventory) taxes were proposed to the council, subject to congressional approval. Mayor Washington promised fund consolidation, rather than cutbacks, to support current programs.

Education. Another major breakthrough in District affairs came in October when Congress approved the motion for an elected Washington school board. Elections were scheduled for November 1968. The appointment in October of William H. Manning as school superintendent stirred controversy among some Negro factions, which nominated a Negro educator, Dr. Benjamin J. Henly, Jr. Dr. Henly was immediately chosen deputy superintendent. Educational efforts were also aided by an intensive 15-month study of the present Washington school system by Columbia University Teachers College. The study made several recommendations for improvement of the system.

In June a federal judge, J. Skelly Wright, ordered busing in Washington. He ruled that segregation of Negro children in the public schools of the city—resulting from neighborhood population patterns such as the exodus of middle-class families to the suburbs—was as unconstitutional as segregation ordained by law.

The city's first public four-year higher educational facility, the Federal City College, was scheduled to open in the fall of 1968.

Crime. President Johnson signed a controversial anti-crime bill for Washington in December. The provisions of the bill most criticized authorize police to arrest and question suspects for three hours before formally charging and bringing them before a magistrate, and limit judicial discretion by prescribing minimum prison sentences (instead of only maximum sentences) for certain felonies. The bill also provides severe penalties for riot-incitement and participation in riots. The city's soaring crime rate was reportedly a major factor in the President's decision to approve the bill. A 44.3% increase in crime for the city as a whole over the preceding year was reported in November.

Other Developments. Critical problems of slum housing and lack of adequate low-cost housing spurred development of a 335-acre model community in the Northeast area of Washington. A $366,000 federal model cities grant permitted planning of a 1,500-acre community in Washington's inner city.

Final plans were approved in 1967 for an area-wide rapid transit system, providing a 25-mile, 32-station system within Washington itself.

JEAN E. SPENCER
University of Maryland

WEATHER

UPI

DRIVEN BY STRONG AUTUMN WINDS, a brush fire races across the California countryside near Los Angeles.

WEATHER

Several violent storms took place around the world in 1966–67. Computer forecasting techniques were adopted by meteorologists as part of their standard procedure; new weather satellites were placed in orbit; and plans for a worldwide meteorological research program were initiated.

THE WEATHER CALENDAR

Winter. The worst weather disaster of the winter of 1966–67 took place near Rio de Janeiro, Brazil, where cloudbursts and floods killed 1,400 persons. Typhoon Pamela destroyed 100,000 homes in the Philippines, while floods in Malaysia left 70,000 persons homeless along the Kelantan River. In December, 264 lives were lost when the ferry *Heraklion* was sunk in the Aegean Sea by stormy weather. A rare snowstorm in Mexico City caused 34 deaths, and hurricane-force winds in western Europe during February killed many persons. Drought conditions continued in India.

In the United States, the lower Great Plains states experienced less than half the average annual winter precipitation. The West Coast had ample rainfall, however, with some flooding in California in December. Northern states had more than their usual share of storms, and records were established in many places—in particular, the hard-hit Chicago area, where 3 feet of snow fell in an 11-day interval in January and early February. Temperatures were coldest early in the season, but warm spells set many new records later. The coldest local temperatures were recorded in northern Minnesota and central Alabama, where the thermometer registered 4° F (about 2.2° C) below the average.

Spring. The season's weather disasters included massive landslides near Caraguatatuba, Brazil, in March. Slides caused by the rain killed 200 persons and injured 500 more. In Pakistan, torrential rains near Peshawar killed 50 persons in March. A cyclonic storm in May destroyed 800 villages on the Bay of Bengal, leaving 100,000 persons homeless.

In the United States, a rash of tornadoes in northeastern Illinois on April 21 caused 55 deaths and 1,000 injuries, with damage in the millions of dollars. Spring was warm in the southeastern and Gulf states; most of Texas had temperatures 4° F above average. The New England states and Montana were cold centers. Rainfall was excessive over California—150% to 250% above average—and rain also was abundant throughout the Appalachian region. Flooding occurred in the Missouri River basin.

In New Mexico, southern Texas, and Florida, on the other hand, drought conditions prevailed. The drought spelled disaster for wildlife in the Everglades and was indirectly responsible for the burning of 100,000 acres (40,500 hectares) of sawgrass and pine woods. Livestock losses also were high.

Summer. A heavy monsoon in India broke 2 years of drought. The Indus Valley had the highest rainfall in 30 years; the rain benefited the crops, although 500,000 persons in Bishar were made homeless by the flooding. In Nepal, 22 villages were flooded and thousands of persons were driven from their homes. Typhoon Billie devastated 200,000 homes in Japan, killing 300 persons.

In the United States, warm dry weather in the Pacific Northwest set the stage for widespread forest fires. Central, eastern, and southern states had a cool and fairly rainy summer; only central Texas remained drought-stricken. In Alaska, floods of the Chena River inundated the Fairbanks region in August, causing 7 deaths and more than $200 million damage.

Autumn. A belated hurricane season brought a sudden burst of storms both in the Atlantic and western Pacific Oceans. Among them was Beulah, one of the greatest tropical storms of the century. In the wake of its path through the Caribbean Sea, Mexico, and Texas, it left $1 billion in damage from floods and a record of 95 storm-spawned tornadoes. The worst floods of the Rio Grande in 34 years were produced by 20-inch rainfalls. However, excellent storm warnings held the loss of life to 37.

East of the Rockies cold weather set in early, while the West was warm. Fire-promoting Santa Ana winds and rain plagued Southern California.

In the Southern Hemisphere, Argentina had a cold late spring and devastating floods.

DEVELOPMENTS IN METEOROLOGY

A broad meteorological program was initiated in April 1967 when the 5th Congress of the World Meteorological Organization (WMO) met in Geneva, Switzerland. The major accomplishment of the Congress was the approval of the first phase of a World Weather Watch during the years 1968–71. New stations will be set up in areas inadequately covered at present, and surface information will be coordinated with data gathered by constant-level balloons and satellites. The inadequate facilities in the area of the Tropics will be strengthened, and further experiments with weather buoys will be undertaken.

The information collected will be used in a Global Atmospheric Research Program, designed primarily to test mathematical models of the atmosphere—one aim of which is to produce reliable forecasts for periods of about 2 weeks in advance. The 130 WMO countries pledged the necessary funds.

Forecasting with Atmospheric Models. The U. S. National Meteorological Center has introduced into its routine procedures a new dynamic model of the atmosphere. The model divides the atmosphere into six layers; the original analysis is performed by computer, using observations from 2,000 gridpoints of the Northern Hemisphere. This complex model incorporates the effects of surface friction, orographic (mountain) lifting of air, the radiative and measurable heat exchange at the ocean surface, and radiative heat losses from snow covers. A 36-hour forecast requires 2 hours of computer time. Moisture and precipitation forecasts are included; the resultant latent heat transactions are considered in the model.

TORNADOES in late April passed through northeastern Illinois, reducing houses to splinters in Belvidere, where nearly 50 were killed and more than 1,000 were injured.

UPI

Predictions of air flow patterns at 18,000 feet (6,000 meters) have improved to such an extent that they are far superior to subjective forecasts. Dramatic improvements in forecasting air flow at sea level also have been made, including the prediction of heavy snow storms. Experimental attempts have been made to forecast hemispheric weather patterns as far as 3 to 6 days in advance.

A British 10-level atmospheric model based on the primitive equations of motion incorporates the latent heat effects of evaporation and condensation up to 23,000 feet (7,600 meters). It gives very realistic vertical profiles that lead to good approximations of precipitation amounts and intensities.

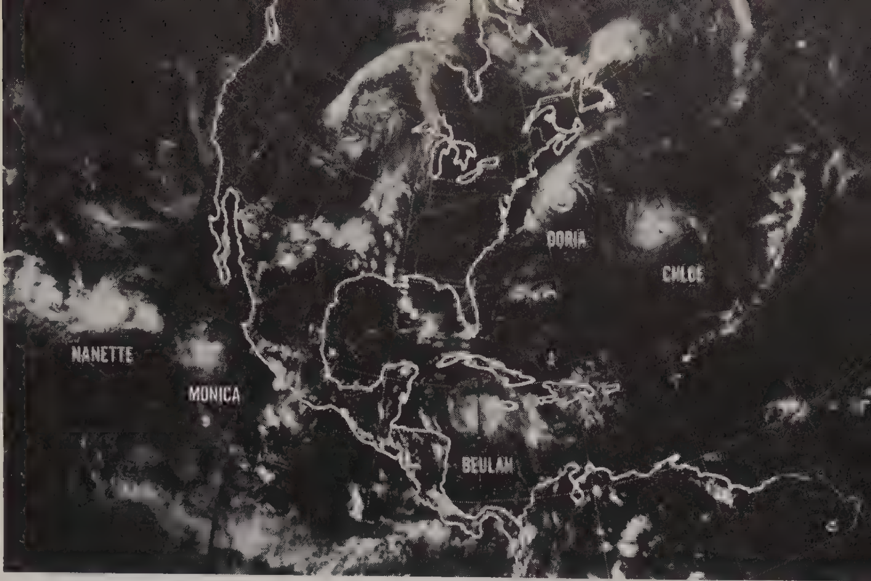
Circulation Studies. An analysis of moisture sources and flow patterns over the United States reveals the primary source regions as the Pacific Ocean and the Gulf of Mexico. The annual water flux, estimated at 5 trillion tons, takes place mostly in the first 10,000 feet (3,300 meters) of air. About 60% of the moisture flows into Canada and over the Atlantic Ocean; the rest is precipitated.

The curious biennial oscillation in stratospheric winds over the equator, noted since 1954, was disrupted in 1963–64 by heat absorption of dust about 13 miles (21 km) above the earth. The dust, introduced by the eruption of Bali's Mount Agoeng, raised temperatures 3° F (about 1.7° C). This caused westerly flow to persist longer, but easterly winds gradually returned. The oscillation from west to east winds seems to be restored to its old tempo.

Gravity waves with periods of 30 minutes to 2 hours have been discovered in the atmosphere. They are suspected to cause wind shears that affect the jet stream and interfere with other global wind patterns. They may also play a role in clear air turbulence (CAT), one of the hazards of aviation.

Major mountain barriers are the source of these air swells. CAT has frequently been noted in the lee of large U. S. mountain ranges. The regions up to 200 miles (320 km) downwind of the Sierra Nevada and Rocky Mountains are the most affected. Records of electrical coronas discharged from airplanes in areas of CAT indicate that the turbulence must often be associated with strong external electrical fields. The high hopes placed on lasers for detection of CAT by airplanes have not materialized. National Aeronautics and Space Administration (NASA) tests show that there is no appreciable backscatter of ruby laser light from turbulent air streams. (See also ATMOSPHERE RESEARCH.)

Weather Modification. Ice particles falling from cirrus clouds into lower convective clouds can cause small thunderstorms and rain by acting as condensation nuclei and by releasing latent heat through the freezing of supercooled cloud particles. Experiments have shown that when tropical cumulus clouds with tops below 23° F (−5° C) were seeded with silver iodide from airplanes, the clouds had an average growth of over 10,000 feet (3,300 meters). The formation of convective clouds also has been successfully initiated by the spreading of massive quantities of finely dispersed common salt, which leads to condensation of water at 80% to 90% relative



FIVE HURRICANES at once over waters adjacent to North America are shown in a map composed of a series of photographs made on Sept. 14, 1967, by the ESSA 5 weather satellite. Beulah, one of the worst hurricanes of the century, is shown due south of the island of Cuba.

ESSA

humidity. Vertical air motions are induced through the release of latent heat.

Reports from the Soviet Union indicate notable success with hail dispersion in the northern Caucasus and Transcaucasus mountains. Of the hail damage caused there by intense storms, 85% developed along frontal zones. New forecast methods therefore were developed for alerting modification teams to the approach of such storm systems. The forecasts verified 90% of the cases.

In its initial stages hail storms in the subfreezing cloud layers at temperatures of 14° F (−10° C) or below. About 3 ounces (85 grams) of silver or lead iodide provided sufficient ice nuclei to compete with natural nuclei and freeze the subcooled water droplets, forming many small pellets instead of large hailstones. The clouds were seeded by shells from highly accurate anti-aircraft guns. Timing is very important; the firing must be done within 2 or 3 minutes after radar reporting of a hail center. The Soviet Union claims that hail damage in protected areas has been reduced 65% to 85%.

Satellite Meteorology. ESSA 4 (a U. S. Environmental Survey Satellite) was launched on Jan. 27, 1967. Cameras aboard the craft sent pictures directly to weather stations equipped with relatively simple receiving equipment. ESSA 5, launched on April 20, achieved a nearly perfect synchronous polar orbit about 840 to 883 miles (1,352 to 1,421 km) high. It circles the earth every 113 minutes and produces pictures of excellent quality. Each photograph covers 4 million square miles (10.3 million sq km). This reduces the number of pictures needed for global coverage from 450 to 144 per day and permits higher processing speeds by computers, which plot mosaics of clouds for forecasting purposes. On November 10, ESSA 6 was sent into a near-polar orbit. Meanwhile the Soviet Union launched a weather satellite, Cosmos 156, on April 27. Its pictures were transmitted from Moscow to Suitland, Md., on the special circuit that connects these two world weather centers. (See also SPACE EXPLORATION.)

Analysis of earlier satellite infrared observations permitted scientists to make inferences about global moisture distribution above 18,000 feet (6,000 meters). In the zones of the westerly winds, most of the atmospheric moisture needed for rainfall is transported in the layers of air near the surface of the earth. The infrared measurements also contributed to knowledge of the radiative energy balance of the atmosphere. For solar radiation, the average reflectivity of the earth changes from about 10% in cloud-free regions to 50% in the cloudiest regions. Longwave radiation from the earth is highest from the North African-Arabian deserts, averaging from 10% to 20% of the incoming solar energy. Over the United States in springtime, about 40% of the solar energy is reflected directly back into space, 13% is absorbed by the atmosphere and clouds, and 47% is absorbed at the earth's surface.

Interpretation of television pictures from weather satellites shows that unusually bright cloud areas often are associated with serious thunderstorms and tornadoes. The reflections come from the cirrus cloud canopies, composed of ice crystals, that form the top layers of severe local storm systems. Current experience indicates that if these bright clouds exceed 40 miles (64 km) in diameter, they are almost certainly accompanied by intense storms.

Balloons and Radiosondes. A newly developed meteorological balloon has reached a record height of 156,000 feet (52,000 meters). An outer streamlined balloon surrounds a high-altitude spherical balloon; the protective shell bursts at about 50,000 feet (17,000 meters) and the inner balloon continues to rise. The system weighs a bit more than 13 pounds (5.8 kg) and is inflated with hydrogen.

New meteorological projectiles carry temperature sensors consisting of coated bead thermistors to heights of 45 miles (72 km). They are fired by modified 5-inch guns. The sensors and a telemetering device are ejected and descend by parachute.

The Soviet Union has joined other nations in the exploration of the high atmosphere by establishing a site of meteorological rocket sondes on Heis Island in the Barents Sea. Rockets are launched each Wednesday from this site and from stations in other countries to measure winds and temperatures from 100,000 to 300,000 feet (30,000 to 100,000 meters).

H. E. LANDSBERG
University of Maryland

WEAVER, Robert C. See UNITED STATES.

WELFARE PROGRAMS. See ANTI-POVERTY PROGRAM; CHILD WELFARE; OLD AGE; SOCIAL SECURITY.

WEST INDIES. See articles on the countries (CUBA, DOMINICAN REPUBLIC, etc.) in the Caribbean area; and also COMMONWEALTH OF NATIONS.

WEST VIRGINIA

The 2-month session of West Virginia's 58th legislature was particularly active. A record number of measures were proposed. The state tax structure was the center of debate. Sweeping reforms were shelved only at the last minute before the March 11, 1967, adjournment date.

New Taxes. A record budget of $237 million was passed by the legislature, with education the chief gainer. To meet these increased expenditures, the legislature levied new taxes, mostly on business and industry, giving appropriate tax credits for investments in equipment to fight air and water pollution. Among the highlights of the tax measure were a 6% corporate net income tax; a 6% tax on the net interstate income of carriers and a 3% levy on intrastate earnings; an increase from 0.4% to 0.8% on the gross sales of manufacturing industries; and a 1.5% tax on the gross income of professional persons.

Other Legislation. One of the most important measures passed by the legislature in 1967 was an act outlining stringent new controls of strip mining in the state. Damaging side effects of strip mining—such as destruction of natural beauty and erosion or landslides in hilly areas—will be controlled or corrected under the new measure. The bill gave extensive powers over strip mining operations to the state's director of natural resources.

The state liquor laws were relaxed in February when the legislature passed a bill allowing the sale of liquor by the drink in both nonprofit and profit-making private clubs. Under a 1935 law, liquor could be sold only in state-operated stores and consumed only at home.

WEST VIRGINIA • Information Highlights

Area: 24,181 square miles (62,629 sq km).

Population: 1,798,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Charleston, the capital, 85,000; Huntington, 81,500; Wheeling, 50,000; Parkersburg, 46,500; Weirton, 29,500; Fairmont, 26,000; Clarksburg, 25,000; Morgantown, 21,000.

Government: *Chief Officers*—governor, Hulett C. Smith (Democrat); secy. of state, Robert D. Bailey (D); atty. gen., C. Donald Robertson (D); treas., John H. Kelly; supt. of publ. instr., Rex M. Smith; chief justice, Harlan M. Calhoun. *Legislature*—West Virginia Legislature (convened Jan. 11-Mar. 11, 1967): Senate, 34 members (9 Republicans, 25 Democrats); House of Delegates, 100 members (35 R, 65 D).

Education: *School enrollment* (1965–66)—public elementary, 246,000 pupils (8,300 teachers); public secondary, 191,500 pupils (6,800 teachers); college and university (fall 1965), 47,402 students. *Public school expenditures* (1965–66)—$147,000,000 ($367 per pupil); average teacher's salary, $4,990.

Public Finance (fiscal year 1966–67): *Revenues*, $522,059,495 (3% consumers sales tax, $56,702,421; motor fuel tax, $43,082,320; federal funds, $174,055,843). *Expenditures*, $532,442,843 (education, $170,560,093; health, welfare, and safety, $114,721,443; highways, $187,527,786). *State debt*, $110,040,000 (July 2, 1967).

Personal Income (1966): $3,937,000,000; average annual income per person, $2,176.

Public Assistance (fiscal year 1967): $40,524,928 to 117,050 recipients (aged, $7,365,409; dependent children, $28,666,916).

Labor Force (employed persons, annual average 1966): *Agricultural*, 28,300; *nonagricultural* (wage and salary earners), 492,400 (25.6% manufacturing, 17.6% trade, 18.6% government). *Unemployed persons* (Aug. 1967)—41,200.

Manufacturing (1965): Value added by manufacture, $2,033,122,000 (chemicals and allied products, $865,025,000; primary metals, $431,489,000; nonelectrical machinery, $37,132,000; electrical machinery, $98,524,000; fabricated metals, $78,930,000; food and products, $72,397,000).

Agriculture (1965): *Cash farm income*, $109,323,000 (livestock, $84,657,000; crops, $20,811,000; govt. payments, $3,855,000). *Chief crops* (tons)—hay, 601,000; corn for grain, 63,200; apples, 62,400; potatoes, 20,000; wheat, 14,520; oats, 8,400; peaches, 5,520.

Mining (1966): *Production value*, $894,789,000 (ranks 5th among the states). *Chief minerals* (tons)—bituminous coal, 150,100,000; stone, 9,738,000; sand and gravel, 5,448,000; salt, 1,147,000; clays, 300,000; crude petroleum, 3,674,000 barrels.

Transportation: *Roads* (Dec. 1966), 35,659 miles (57,375 km); *motor vehicles* (1967) 704,780; *railroads* (1966), 6,615 total miles (10,644 km); *airports* (1966), 52.

Communications: (1966): *Telephones*, 626,300; *television stations*, 8; *radio stations*, 75; *newspapers*, 32 (daily circulation, 492,685).

Other measures passed by the legislature were a strong air pollution control act; a somewhat weaker water pollution act; a broad human rights program; and an increase in workmen's compensation. Throughout the year there were public demands for a sweeping reform of the court system and for broad constitutional reform, but no action was taken.

Economy. West Virginia's economy enjoyed another record year in 1967. A new natural gas well near Moorefield produced more than 90 million cubic feet per day, a new record. There was also a dramatic increase in electric power production that brought the state's kilowatt output at the end of 1967 to six times the 1940 level. The total unemployment rate continued the encouraging downward curve that it had followed during the preceding two years, with an 8% decrease in 1967.

Of the 22 standard business indicators, 19 showed an improvement over their 1966 level. The only shadow on the state's economic picture was a continuing population loss—a drop of 0.6% during 1967. Since the 1960 census West Virginia's population had fallen an estimated 3.3%.

Apportionment. Late in the year Gov. Hulett Smith called a special session of the legislature for Jan. 3, 1968, a week before the opening of the regular 30-day session. The long-expected special session was called specifically to realign West Virginia's five congressional districts to meet the Supreme Court's "one man, one vote" principle. The governor said that some of the districts were as much as 30% out of balance.

Bridge Collapses. A suspension bridge between Point Pleasant, W. Va., and Kanauga, Ohio, collapsed under a 5 P.M. traffic load on Dec. 15. About 40 vehicles plunged into the icy Ohio River. By the year's end, 36 bodies had been recovered and 10 other persons were still listed as missing.

DONOVAN H. BOND
West Virginia University

WESTERN SAMOA

Western Samoans continued to push for economic development and improved social conditions in 1967. Under an agreement announced in April, 80 Peace Corps volunteers from the United States began service in health programs late in the year.

Elections. Prime Minister Fiame Mata'afa and all but one of his cabinet retained their parliamentary seats after the general election held on February 25. The new parliament met on March 14 and unanimously elected Mata'afa to his third 3-year term.

Economic Development. A 5-year plan presented to parliament early in the year outlined a program of government borrowing to finance the promotion of industry, establishment of a bank, and improvements in education. Its primary objective was to provide jobs for the growing population.

The agricultural economy made a rapid recovery from the damage caused by the 1966 hurricane. In a drive to increase agricultural production within a decade, the government introduced an accelerated program of planting coconuts, cacao, and bananas.

Hotels and airlines continued to expand facilities. Pacific islands representatives attended a tourism conference in Apia on May 29–31.

WESTERN SAMOA • Information Highlights

Area: 1,097 square miles (2,842 sq km).
Population: 131,000 (Nov. 21, 1966 est.).
Chief City (1961 census): Apia, the capital, 21,699.
Government: *Head of State*—Malietoa Tanumafili II (took office April 5, 1963, for life); *Prime Minister*—Fiame Mata'afa Faumuina Mulinu'u II (took office 1962). *Parliament*—Legislative Assembly, 47 members.
Religious Faiths: Christians, 99.7% of population.
Education: *Literacy rate* (1951), 86% of population aged 15 and over. *Total school enrollment* (1964)—35,043 (primary, 27,391; secondary, 7,197; teacher-training, 205; technical, 154; higher, 96).
Finance (1964 est.): *Revenues*, $5,589,000; *expenditures*, $5,808,000; *monetary unit*, Samoan pound (0.3597 pound equals U. S.$1); as of July 10, 1967, the tala (0.8300 tala equals U. S.$1).
Crops (metric tons): Bananas (1964–65), 27,000.
Foreign Trade (1965): *Exports*, $5,790,700 (chief exports: bananas and plantains, $1,695,800); *imports*, $9,146,200 (chief imports: wood, lumber, and cork, $792,300; electrical machinery, $558,800). *Chief trading partners:* New Zealand (took 44% of exports, supplied 30% of imports); Britain (took 15% of exports, supplied 10% of imports).

On July 10 the nation officially changed currencies. The Samoan pound, on par with the New Zealand pound, was replaced by a new monetary unit, the *tala*, which is equivalent to U. S.$1.12.

HOWARD J. CRITCHFIELD
Western Washington State College

WESTMORELAND, William C. See biographical sketch under ARMY.

WHOLESALE SELLING

Sales by U. S. merchant wholesalers in the first half of 1967 reached a record $99.9 billion, but the figure was only 0.4% higher than a year earlier. Wholesalers' nondurable goods sales rose 3%, while durable goods sales fell 2.6%.

Wholesale prices in the first half of 1967 differed little from those in the corresponding period of the previous year. Thus all of the moderate sales rise from the first half of 1966 to the first half of 1967 could be attributed to a higher physical volume of goods passing through wholesale channels.

Inventories. Wholesalers' inventories rose sizably in the latter half of 1966 and dropped moderately in the first half of 1967. Sales rose only moderately, so that the stock-sales ratio in mid-1967 stood 10% higher than a year earlier.

Durable Goods. Merchant wholesalers of durable goods encountered mixed sales movements. Because the housing construction industry was depressed, sales by lumber and construction materials dealers fell almost 20% between the first half of 1966 and the first half of 1967. Sales of hardware and of plumbing and heating equipment were 5% lower. Metals sales were also weak, particularly in iron and steel products and iron and steel scrap.

Wholesalers of motor vehicles and automotive equipment reported shipments 4% higher in the first six months of 1967 than in the corresponding period a year earlier.

MERCHANT WHOLESALERS' SALES, 1965–67
(in millions of dollars)

	1965 Full year	1966 Full year	1966 First six months	1967 First six months
Total sales	187,141	203,751	99,529	99,887
Durable goods total[1]	82,691	91,026	44,987	43,805
Motor vehicles, automotive equipment	12,243	13,442	6,706	6,986
Electrical goods	12,518	13,909	6,541	6,632
Furniture, home furnishings	3,803	4,342	2,059	2,133
Hardware; plumbing, heating equipment, supplies	8,366	8,937	4,393	4,190
Lumber construction materials	9,758	9,512	4,915	3,953
Machinery equipment, supplies	20,711	20,859	11,836	11,887
Metals, metalwork (except scrap), scrap waste materials	4,777	5,215	2,708	2,259
Nondurable goods total[1]	104,450	112,724	54,541	56,082
Groceries, related products	37,541	39,882	19,529	20,123
Beer, wine, distilled alcoholic beverages	9,380	9,954	4,603	4,820
Drugs, chemicals, allied products	7,267	7,788	3,809	3,998
Tobacco, tobacco products	4,992	5,240	2,519	2,543
Dry goods, apparel	8,766	9,637	4,580	4,808
Paper, paper products (excluding wallpaper)	5,546	6,266	3,049	3,061
Farm products (raw materials)	13,794	15,327	7,303	7,338
Other nondurable goods	17,164	18,593	9,127	9,336

[1] Totals include data for some kinds of business not listed separately.
Source: U. S. Department of Commerce.

Nondurable Goods. Every major line of nondurable goods trade contributed to the overall rise in sales from 1966 to 1967. Food wholesalers showed a gain of 3%, with groceries up twice that much. Dealers reported increases of 5% in wine and liquors and also in drugs and chemicals. The largest relative advance (14%) was registered by apparel establishments.

LAWRENCE BRIDGE
Office of Business Economics
U. S. Department of Commerce

WILSON, (James) Harold

Prime Minister of Britain: b. Huddersfield, Yorkshire, England, March 11, 1916.

The most important decisions of Prime Minister Wilson and his government in 1967 concerned the British economy and Britain's bid for membership in the European Economic Community. On both scores the government was forced to make hard choices—to devalue the pound and to pursue Common Market membership in the face of obdurate French resistance—and the popularity of Wilson and the Labour party suffered.

The Economy. For a party that campaigned successfully in 1964 as the party best able to "get the economy moving," Labour had fallen far short of expectations by the end of 1967. For most of the year unemployment stood at 2.5%—the highest rate since 1963—and, while the government's wage-price policy kept wages under control, electoral discontent over rising prices grew apace.

The prime minister reassuringly said that the high rate of unemployment was the short-term cost of long-term economic growth, but by August electoral and party restiveness had persuaded him to take personal charge of the government's economic policy. Thereafter Britain's balance of payments position continued to deteriorate and foreign confidence in the pound continued to slump. Finally, on November 18 the government ended its repeated protestations about defending the pound and announced that it was devaluing sterling 14.3%.

KEYSTONE PRESS

PRIME MINISTER Harold Wilson (*left*) of Britain confers with his foreign secretary, George Brown, in January.

The Wilson government's attempts to fulfill the promises on planning and technological improvement involved it in further political controversy. In November it announced that technical advances in natural gas and nuclear power made contraction of the coal industry inevitable. The announcement was bitterly criticized by the mining unions—one more example of the extent to which the unions, hitherto Labour's most loyal supporters, have become disenchanted.

Foreign Affairs. Between January and March, Wilson visited the capitals of all the Common Market countries to solicit aid for British entry. In May, Britain formally applied for membership. Wilson took the position at home that membership would help to combat the stagnation of Britain's economy. His new position had a touch of unintended irony, for he had been one of the more outspoken of the Labour opponents of the Conservatives' attempt to lead Britain into the Common Market in the early 1960's.

The principal hindrance in 1967 was France, and by the summer it was clear that French opposition had become adamant. Wilson reacted tactfully, intimating that France's resistance could be overcome in time.

Wilson's continuing support of U. S. policy in Vietnam aroused criticism from Labour's left wing. But the prime minister partially overcame the criticism by disclosing that he and Soviet Premier Kosygin had "almost" succeeded in effecting a Vietnam truce during their February meeting in London.

Career. Wilson graduated from Oxford University in 1937 and was a fellow and lecturer of University College from 1937 to 1940. During the war he worked as a civil servant in London. He entered Parliament in 1945, the cabinet in 1947, and Labour's leadership in 1963. He became prime minister in 1964.

A. J. BEATTIE
London School of Economics and Political Science

WINE

World wine production totaled 7,181,000,000 gallons in 1966, or 4.2% less than in 1965. U. S. production dropped 32,800,000 gallons (14.5%) to 194,000,000 gallons. California produced 159,000,000 gallons, or 82% of the U. S. total in 1966, and New York accounted for 17,300,000 gallons, or 8.9%.

Consumption. Total apparent consumption of wine in the United States in 1966 was 191,147,000 gallons, or 0.97 gallons per capita. This consumption represents an increase of only 0.7% over that of 1965. California supplied 144,302,000 gallons, or 75% of the wine consumed; other states accounted for 15.1%; and foreign countries for 9.4%.

U. S. table wine and U. S. dessert wine accounted for 35.7% and 40.4%, respectively, of wine consumed in the United States in 1966. The remainder was divided as follows: U. S. vermouth and special natural wines, 10.7%; foreign table wines, 5.4%; U. S. sparkling wines, 3.9%; foreign vermouth, 2.3%; foreign dessert and sparkling wines, 0.8% each.

In conformity with the trend established in the United States for the last few years, consumption of table wines in 1966 increased by 4.5 million gallons (6.1%); sparkling wine consumption was up 1.3 million gallons (17.5%); vermouth and special natural flavored wines remained nearly constant; and consumption of dessert wines decreased 4.5 million gallons (5.4%) in comparison with 1965.

General prosperity in the Western world and a growing interest in wines as cultural adjuncts have focused demand on wines produced from low-crop-yielding, premium-quality grape varieties and have delimited areas of especially suitable soils and climate. Of the 142,021 acres of wine grapes in California, 15,819 acres are nonbearing, that is, less than four years of age. Of the total of 2,549 acres of *Vitis vinifera*, var. Cabernet-sauvignon, which makes California's finest red table wines, 1,212 acres are in newly planted vineyards. The Lodi area in San Joaquin county, Calif., is producing larger quantities of standard quality table wines each year.

WORLD WINE PRODUCTION, 1965 AND 1966

Region	Production (thousands of U. S. gallons) 1965	1966
World total	7,491,782	7,180,767
Algeria	317,013	237,760
Argentina	482,682	578,997
France	1,758,578	1,609,766
Germany, West	133,026	127,052
Greece	102,447	102,214
Hungary	65,604	87,945
Italy	1,801,850	1,720,853
Portugal	394,386	240,283
Rumania	171,730	171,715
South Africa	118,015	109,994
Spain	727,640	832,091
USSR	509,950	483,799
United States	226,802	194,000
California	196,098	159,000
Yugoslavia	136,051	150,317

Source: Office International de la Vigne et du Vin, Paris; and California Wine Institute, San Francisco.

Technical Developments. Rising vineyard and winery labor costs have led to the development of mechanical harvesters for vineyard use and continuous perforated-belt presses for the wineries.

A. DINSMOOR WEBB
University of California at Davis

WIRTZ, W. Willard. See biographical sketch under UNITED STATES.

WISCONSIN • Information Highlights

Area: 56,154 square miles (145,439 sq km).
Population: 4,188,000 (July 1, 1967 est.).
Chief Cities (1965 est.): Madison, the capital, 154,000; Milwaukee, 765,000; Racine, 94,500; Green Bay, 82,500; Kenosha, 76,000; West Allis, 73,500; Wauwatosa, 61,000.
Government: *Chief Officers*—governor, Warren P. Knowles (Republican); lt. gov., Jack B. Olson (R); secy. of state, Robert C. Zimmerman (R); atty. gen., Bronson C. LaFollette (Democrat); treas., Dena A. Smith; supt. of pub. instr., William C. Kahl; chief justice, C. Harold Hallows. *Legislature*—Wisconsin Legislature (convened Jan. 11, 1967): Senate, 33 members (21 Republicans, 12 Democrats); Assembly, 100 members (52 R, 47 D, 1 vacancy).
Education: *School enrollment* (1965–66)—public elementary, 523,000 pupils (20,300 teachers); public secondary, 347,000 pupils (17,530 teachers); nonpublic, 287,600 pupils (9,420 teachers); college and university (fall 1965), 129,307 students. *Public school expenditures* (1965–66)—$435,800,000 ($557 per pupil); average teacher's salary, $6 425.
Public Finance (fiscal year 1966–67): *Revenues*, $1,624,999.848 (3% sales tax, $97,726,695; motor fuel tax, $108,385.058; federal funds, $256,253,136). *Expenditures*, $1,536,290,479 (education, $467,501,908; health, welfare, and safety, $211,149,843; highways, $272,222,058).
Personal Income (1966): $12,390,000,000; average annual income per person, $2,973.
Public Assistance (fiscal year 1967): $128,114,503 to 119,831 recipients (aged, $12,138,012; dependent children, $28,073,609).
Labor Force (employed persons, annual average, 1966): *Agricultural*, 181,000; *nonagricultural* (wage and salary earners), 1,544,400 (32.9% manufacturing, 18.6% trade, 13.9% government). *Unemployed persons* (annual average, 1966) —56,600.
Manufacturing (1965): Value added by manufacture, $6,157,761,000 (transportation equipment, $632,888,000; nonelectrical machinery, $1,270,069,000; electrical machinery, $679,439,000; food and products, $821,990,000).
Agriculture (1966): *Cash farm income*, $1,301,343,000 (livestock, $1,069,146,000; crops, $180,628,000; govt. payments, $51,569,000). *Chief crops* (tons)—hay, 9,690,000 (ranks 1st among the states); oats, 1,619,680 (rank, 3d).
Mining (1966 est.): *Production value*, $73.652,000.
Fisheries (1966): *Commercial catch*, 44,400,000 pounds ($2,200,000). *Leading species* (1965)—alewives, 10,866,519 pounds; chubs, 5,441.326 pounds; carp, 2,006 026 pounds.
Transportation: *Roads* (1967), 100,778 miles (162,152 km); *motor vehicles* (1967), 2,055,009; *airports* (1967), 12.

WISCONSIN

With both houses controlled by Republicans, the Wisconsin legislature in 1967 passed several far-reaching bills, including a revised presidential primary law, but failed to enact some others. Legislators also approved the state's first billion-dollar budget.

Revised Primary System. In a move that attracted the attention of political observers and potential candidates across the nation, the Wisconsin legislature revamped the state's primary system in 1967. The Wisconsin presidential primary on April 2, 1968, will be the first in the country open to all major presidential candidates. The new system has a unique feature allowing voters to cast a "no" ballot against a candidate. An 11-member bipartisan committee will select the names of candidates to appear on the ballot. Those selected will be able to remove their names only by signing statements declaring that they are not candidates.

Reorganization of State Agencies. In response to a 16-month study conducted by a task force appointed by the governor, the legislature approved a massive reorganization of state agencies. The law, which became effective on August 1, reduced the number of state agencies from 85 to 28 by uniting departments with related functions. The reorganization was accomplished despite strong protests from powerful conservation interests that opposed the merger of the conservation department with the resource development department. Legislators resisted the protests but they agreed to delay the full merger of the two departments until July 1, 1968.

Constitutional Changes. Following voter approval of an April referendum, the legislature amended the state constitution to allow state aid for the transportation of private and parochial school pupils. Other changes included the passage of amendments to extend to 4 years (from 2 years) the terms of the governor, lieutenant governor, secretary of state, treasurer, and attorney general, and to provide for the election of the governor and lieutenant governor on the same ticket.

Repeal of Margarine Ban. A battle that had been bitterly fought in Wisconsin for years ended on May 4 when the legislature lifted the state's 72-year-old ban on the sale of colored oleomargarine. Supporters of the action denied that change would harm Wisconsin's position as a dairy state. The repealer was regarded as a reflection of urban demands and legislative reapportionment.

Highway Safety. Gov. Warren P. Knowles' high-

UPI

MILWAUKEE police arrest the Rev. James E. Groppi, a priest who led a series of demonstrations in favor of open housing in Milwaukee.

way safety program failed to receive legislative approval. The Republican governor had called for raising the legal beer-drinking age from 18 to 21 years, and had recommended mandatory vehicle inspections and driver reexaminations.

Budget. Legislators trimmed only a small amount from the governor's proposed budget for the 1967–69 biennium. The $1,087,313,800 budget, highest in state history, was approved without a tax increase.

Economy. The economic picture in Wisconsin continued to be bright in 1967, although the impressive gains registered in the two previous years were not matched. Farm income was down, while manufacturing employment remained about level with the 1966 rate.

Antiwar Protest. Students protesting job recruiting by the Dow Chemical Company, which makes napalm for the military, clashed in a bloody struggle with police at the University of Wisconsin, Madison, on October 18. About 2,500 students were involved in the demonstration.

PAUL SALSINI
Milwaukee "Journal"

WOOL

A remarkable recovery in Australia's wool production helped raise world wool production in 1967–68 to a high of 5,933,000,000 pounds (greasy basis). This exceeded the previous peak (1963–64) by 3½%. While still the sixth-ranking clip in the world, U. S. wool output continued its declining trend to 229,000,000 pounds in 1966–67.

U. S. Wool Textile Industry. Government measures to stem inflation in the fall of 1966 slowed expansion in the textile industry as in other areas of the economy. A rising trend in wool consumption during the first half of 1966 changed to a declining trend that persisted into 1967 as retailers and manufacturers drew on inventories to meet consumer demand.

Apparel wool consumption in wool textile mills was 16% lower during the first eleven months of 1967 than in the corresponding period of 1966, causing a reduction of 35% in imports of apparel wool. By the fall of 1967, excellent retail clothing sales had reduced inventories to the point where new orders for men's tailored clothing and all knitwear had to be increased sharply. In the women's wear market a gradual shift away from the mini-fashions that called for lightweight fabrics was expected to increase wool consumption during the second half of 1967.

U. S. mills in 1966 consumed 378,000,000 pounds (scoured basis) of wool, or 11% of the world total. Woven and knitted textiles took 274,000,000 pounds, and carpets took 104,000,000.

WORLD PRODUCTION OF VIRGIN WOOL
(In million pounds, greasy basis)

Country and types	Average 1956–59 to 1960–61	1966–67	1967–68 Forecast	1967–68 % of total
Country				
Australia	1,582	1,759	1,817	30
USSR	690	820	850	14
New Zealand	539	709	735	13
Argentina	414	441	436	7
South Africa	296	300	317	5
United States	309	235	229	4
Uruguay	181	190	190	3
Other countries	1,329	1,403	1,361	24
Total	5,340	5,857	5,933	100
Type				
Merino (fine)	2,177	2,323	2,376	40
Crossbred (medium to coarse)	1,951	2,271	2,309	38
Total apparel-type	4,128	4,594	4,685	78
Other (mostly carpet type)	1,210	1,263	1,303	22

(Source: Commonwealth Economic Committee.)

World Wool Consumption. Anti-inflationary measures in most other major wool-consuming countries produced economic contraction similar to that in the United States. A recovery in the demand for wool late in 1967 was not expected to prevent the year's consumption from falling 5% or 10% below the 1966 record of 3,335,000,000 pounds (clean basis) consumed. Heavy carryovers of crossbred wool in primary producing countries still hung over the world market, a result of fashion emphasis on lightweight fabrics and of the general economic slowdown.

RUTH JACKENDOFF
The Wool Bureau, Inc.

WORLD BANK. See INTERNATIONAL FINANCE.

WORLD HEALTH ORGANIZATION

The World Health Organization (WHO), a specialized agency of the United Nations, continued its worldwide efforts in 1967 to attain the highest possible level of health for all peoples.

Membership and Finances. In 1967 there were 129 member states in WHO (including three associate members), each of which contributes toward the WHO regular budget in a fixed ratio. In May 1967, the Twentieth World Health Assembly, composed of delegates from member states, adopted a working budget of $56,123,000 for WHO's program in 1968. WHO assistance to governments and WHO technical services are also financed with the help of voluntary contributions and by the United Nations Development Program and the United Nations Children's Fund (UNICEF).

Disease Eradication. Campaigns to eradicate malaria and smallpox are the major concern of WHO's war against communicable disease. The smallpox eradication program, begun in 1967, will be continued and intensified in 1968. The Twentieth World Health Assembly set aside $2,800,000 in 1968 for this purpose.

At the end of 1966 malaria eradication had been achieved in areas inhabited by 633 million people. Eradication programs were under way for 618 million people, but 384 million people exposed to malaria were still awaiting the protection of organized antimalaria operations. A total of $6,794,238 was set aside by the Health Assembly for malaria eradication in 1968. Other UN agencies and voluntary organizations contribute to the antimalaria work.

Research. New activities in cancer research undertaken by WHO include the first systematic collection of data on the results of cancer treatment. Research in cardiovascular diseases continued. WHO's new Division of Research in Epidemiology and Communications Science is concerned with the health aspects of rapid social change as exemplified by rural-urban migration and rapid industrialization.

Population Dynamics. The program of WHO dealing with health aspects of population dynamics involves the support of national research projects and the training of staff. Studies and laboratory research are also being carried out on the biological, medical, and public health aspects of human reproduction. Consultative services are available to governments on fertility and sterility-fertility regulation.

Drugs. The increasing use of LSD and related hallucinogenic substances led the Twentieth World Health Assembly to adopt a resolution calling on

WHO

WORLD HEALTH ORGANIZATION WORKERS, in a project supported by UNICEF, test villagers in Liberia for malaria.

countries to restrict the use of these drugs to scientific and special medical purposes and to provide machinery for supervision of production, distribution, and conditions of use. The assembly also expressed concern about the increasing use of dependence-producing drugs of the sedative and stimulant types that are not yet under international control. Member states that have not done so were asked to make such drugs available only by prescription.

World Health Foundations. The concept of world health foundations to encourage voluntary contributions for the improvement of world health gained impetus from the establishment of the Federation of World Health Foundations in early 1967. The W. K. Kellogg Foundation has made a 3-year grant of $418,200 for the developmental period.

R. L. Coigney, M. D.
WHO Liaison Office with United Nations

WRESTLING. See Sports.

WYOMING

Wyoming experienced another lackluster year in some aspects of its economy during 1967, but tourism and use of the state's numerous recreational areas showed important gains. The legislature convened on January 10 for its regular 40-day biennial session under the guidance of Republican Gov. Stanley K. Hathaway, who was beginning his first term.

Legislation. General fund appropriations totaled $62.4 million (about $12 million above the appropriations made in 1965), and state agencies were authorized to spend $61.8 million from sources other than the general fund. To augment revenue, the legislature enlarged the tax base to include services, raised the state sales tax and use tax from 2.5% to 3%, increased the cigarette tax from 4 cents to 8 cents a package, made beer and liquor subject to the state sales tax, and increased gasoline tax from 4 cents to 5 cents a gallon. The state board of equalization increased the state property tax from 1 mill to 2.5 mills per $1 of valuation.

The legislature legalized pari-mutuel betting on horse races and the sale of liquor on Sunday. Public schools sought a classroom unit valuation of $8,500 under the state school support program, but only $8,200 was conceded.

The Economy. The oil industry, which formerly provided dynamic economic leadership, seemed unable to do better than hold its own during 1967. Production of other minerals increased, however, and optimistic forecasts often were heard about rich reserves of coal, uranium, trona, and oil shale. There was much leasing and exploratory drilling of coal and uranium lands. Above-average production of both livestock and crops was offset by low prices.

Education. Although elementary and secondary school enrollments had leveled off, there were substantial increases at the University of Wyoming and some of the five junior colleges. All these institutions pushed construction programs. A sixth junior college, Central Wyoming College at Riverton, was created during the year.

Tourism and Recreation. Yellowstone National Park again reported a record number of visitors, welcoming more than 2 million guests during the year. The Flaming Gorge Recreation Area, on the Green River in southwestern Wyoming, and the Fort Laramie National Historic Site became increasingly important as tourist attractions. The new Jackson Hole ski development and the Bighorn Canyon National Recreation Area (authorized in 1966), surrounding Yellowtail Reservoir in the northern part of the state, were gaining favor.

T. A. Larson
University of Wyoming

WYOMING • Information Highlights

Area: 97,914 square miles (253,598 sq km).

Population: 315,000 (July 1, 1967 est.).

Chief Cities (1965 est.): Cheyenne, the capital, 50,000; Casper, 42,500; Laramie, 19,000; Sheridan, 11,500; Rock Springs, 11,200; Rawlins, 9,000; Riverton, 8,000.

Government: *Chief Officers*—governor, Stanley K. Hathaway (Republican); secy. of state, Mrs. Thyra Thomson (R); atty. gen., James Barrett (R); treas., Mrs. Minnie A. Mitchell; supt. of pub. instr., Harry Roberts; chief justice, Harry S. Harnsberger. *Legislature* (convened Jan. 10, 1967)—Senate, 30 members (18 Republicans, 12 Democrats); House of Representatives, 61 members (34 R, 27 D).

Education: *School enrollment* (1965–66)—public elementary, 53,000 pupils (2,295 teachers); public secondary, 38,500 pupils (1,963 teachers); nonpublic schools, 4,400 pupils (160 teachers); college and university (fall 1965), 10.715 students. *Public school expenditures* (1965–66)—$50,000,000 ($661 per pupil); average teacher's salary, $6,118.

Public Finance (fiscal year 1966): *Revenues*, $157,000.000 (sales tax, $20,187,400; motor fuel tax, $12,165,000; federal funds, $52,050,000). *Expenditures*, $152,000.000 (education, $34,812,873; health, welfare, and safety, $8.710,265; highways, $63,863,530). *State debt*, $54,755,000 (June 30, 1967).

Personal Income (1966): $874,000,000; average annual income per person, $2,739.

Public Assistance (biennial 1964–66): $17,173,907 to 8,089 recipients (aged, $3,938,032; dependent children, $3,337,001).

Labor Force (employed persons, March 1967): *Agricultural*, 14,000; *nonagricultural* (wage and salary earners), 92,200 (7% manufacturing, 21.1% trade, 30.3% government). *Unemployed persons* (March 1967)—6,620.

Manufacturing (1965): Value added by manufacture, $93,882,000 (petroleum and coal products, $44,253,000; printing and publishing, $7,118,000; lumber, wood products, $8,020,000.

Agriculture (1966): *Cash farm income*, $215,737,000 (livestock, $172,450,000; crops, $31,652,000; govt. payments, $11,635,000). *Chief crops* (tons)—hay, 1,432,000; sugar beets, 781,000; wheat, 142,300; barley, 77,280.

Mining (1966): *Production value*, $504.380,000. *Chief minerals* (tons)—sand and gravel, 7,187,000; bituminous coal, 3,670,000; iron ore, 2,215,400; clays, 1,559,000.

Transportation (1966): *Roads*, 85.082 miles (136,897 km); *motor vehicles*, 263.851; *railroads*, 3,200.13 line miles (5,149 km); *airports with scheduled services* (1967), 11.

Communications: *Telephones* (1967), 166,500; *television stations* (1965), 3; *radio stations* (1965), 30; *newspapers* (1967), 9.

UPI

YEMENI PRINCES Mohammed Bin Ismail (*left*) and Ahmet El Hussein and their followers announce successes in their struggle to regain the throne for the deposed imam of Yemen.

YEMEN

The civil war in Yemen, which has raged intermittently since 1962, continued with renewed vigor in 1967. Although the pro-Egyptian president, Abdullah al-Salal was overthrown on November 5 and the last Egyptian troops withdrew from Yemen in December, there was doubt by year's end whether these developments would lead to a peaceful settlement between royalist and republican forces.

"Third Force." Saudi Arabia, which was reported to be spending $20 million annually in support of the royalists, pressed them in 1967 to effect a coalition with a dissident group of republicans known as the "third force." The members of the "third force" are not royalists but were opposed to Egyptian influence in the ruling republican government.

YEMEN • Information Highlights

ASIA
AFRICA

Area: 75,290 square miles (195,000 sq km).
Population: 5,000,000 (mid-1966 est.).
Chief Cities (1963 est.): Sana, the capital, 100,000; Taiz, 80,000; Hodeida, 45,000.
Government: *Provisional head of state*—Abdul Rahman al-Iryani (took office Nov. 5, 1967); *Premier*—Maj. Gen. Hassan al-Amri (took office Dec. 19, 1967).
Religious Faiths: Muslims, 99% of population; others, 1%.
Education: *Literacy rate*, 5% of population. *Total school enrollment* (1963)—59,100 (primary, 57,894; secondary, 1,116; teacher-training, 55; technical, 35).
Finance (1964–65 budget): Budget balanced at $27,300,000; *monetary unit*, riyal (1.1 riyals equal U. S.$1).
Chief Crop (metric tons, 1965–66 crop year): Coffee, 4,500.
Chief Mineral (metric tons, 1964): Salt, 35,000.
Foreign Trade: *Chief exports:* Coffee, hides and skins, salt, kat (a drug); *chief imports:* textiles, sugar, glass.
Transportation: *Major roads* (1960), 750 miles (1,207 km); *motor vehicles* (1965), 2,930 (automobiles, 2,000); *civil airline*, Yemeni Airline Co.; *principal airport*, Sana.
Communications: *Telephones* (1967 est.): 1,450; *radio stations* (1965), 1; *newspapers* (1965), 3.

Some of the royal princes were strongly opposed to the "third force," asserting that it was only interested in obtaining Saudi gold and in undermining the royalist position. Despite their objection, however, Prince Mohammed ben Hussein, the commander in chief of royalist forces and deputy imam (ruler), signed an agreement to form an anti-Egyptian front between the royalists and dissident republicans. A new royalist cabinet was announced on March 16 that included a representative of the "third force."

Egyptian Withdrawal. Egypt's defeat in the June war with Israel dramatically changed the situation in Yemen and weakened President al-Salal's position beyond repair. Within a few weeks it became apparent that Egypt could not continue to aid the Yemeni republicans.

At the Arab summit meeting in August in Khartoum, Sudan, King Faisal of Saudi Arabia agreed to grant Egypt £50 million annually, ostensibly because of the damage suffered by Egypt during the 6-day war. In reality the money was to ease Egypt's withdrawal from Yemen and to exact a promise not to seek political power on the Arabian peninsula.

On August 31 an agreement was announced establishing a 3-nation commission, composed of representatives of Sudan, Morocco, and Iraq, to supervise the withdrawal of Egyptian troops and the halting of Saudi military assistance and to help the Yemenis achieve unity and stability in accordance with their own wishes. President al-Salal denounced any cease-fire with the royalists, and refused to receive the commission members who visited Yemen on October 4.

The last Egyptian troops left Yemen on December 8. Considerable aid, however, has been given to republican forces by the Soviet Union to fill the void left by the departing Egyptian troops. The expectations of a peaceful settlement between the republican and royalist forces therefore remained in doubt, and serious fighting was raging at the close of the year.

Coup d'Etat. President Abdullah al-Salal, while on a state visit to Iraq on November 5, was overthrown in a bloodless military coup. The army turned the government over to a group of dissident republican civilians representing aspects of the "third force." Abdul Rahman al-Iryani was named provisional head of state and chairman of the newly formed ruling presidential council. Moshen al-Aini was appointed premier. The new republican leaders revealed that they were prepared to discuss some kind of a coalition government for Yemen. They refused, however, to grant the royalists' demand that the republican system of government be put to a plebiscite.

The civil war gained in intensity in mid-December. On December 19 the government announced that Premier al-Aini had resigned and that Maj. Gen. Hassan al-Amri, the armed forces commander, had formed a war cabinet.

Relations with the U. S. On April 6 a Yemeni mob attacked the offices of the U. S. Agency for International Development (AID) in Taiz. Two AID officials were arrested on charges of firing a bazooka at an ammunition dump in an attempt to destroy the city. They were released after three weeks, but the incident led to the termination of the $2.4 million U. S. AID program.

SYDNEY NETTLETON FISHER
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YUGOSLAVIA

The highlights of 1967 in Yugoslavia were constitutional reform, discussions concerning reorganization of the ruling League of Communists of Yugoslavia (LCY), the pursuance of economic reform, a linguistic controversy, and an active foreign policy in connection with the Israeli-Arab war.

Constitutional Reform. On April 19 the Federal Assembly adopted six amendments to the 1963 constitution. They increased the powers of the Council of Nationalities (a separate part of the Federal Council, and one of the five chambers of the Yugoslav parliament), and abolished the post of vice president of the republic and deputy supreme commander of armed forces.

A month later a major reorganization of the federal administration took place. It corresponded to the "principle of rotation" among the highest state and party officials. Thus, excepting Tito, leading LCY functionaries were removed from state executive functions. Tito was reelected president of the republic on May 17, and Milentije Popović became president of the Federal Assembly, to act as deputy in case of absence or incapacitation of the president of the republic. A new Federal Executive Council (cabinet) was elected on May 18, with Mika Špiljak, hitherto chairman of the Croatian Executive Council, as its president. It was the largest governmental reshuffle in Yugoslavia's postwar history. No basic policy changes ensued, however.

LCY Reorganization. On April 27 the 15,000-word *Theses on the Further Development and Reorganization of the LCY,* drafted by a special committee appointed in July 1966, was published. Discussion of the *Theses* is to continue until the 11th Congress of the LCY is held at the end of 1968.

The aim of the *Theses* is to further adapt the LCY to the new conditions of social self-management and to shift "the center of gravity of League action from the exercise of power to ideological-political activity." With an emphasis on the LCY's primary function of carrying out current economic reform, and to protect it against both "conservative resistance" and "too much liberalization," the *Theses* underscored the existence of deep internal divisions within the LCY.

UPI

PRESIDENT TITO waves to greeters at Cairo, August 10, as he arrived for Mideast talks with President Nasser.

TITO was reelected president of Yugoslavia for a 4-year term on May 17, 1967. At the same time, the national government was reorganized in accordance with a Communist party decision of October 1966, assigning a "persuading and educational" rather than commanding role to the party.

Tito, whose name was originally Josip Broz, was born in Kumrovac, Croatia, on May 25, 1892. He served in the Austro-Hungarian Army in World War I and fought with the Red Army during the Russian Revolution. In the 1920's and 1930's he was active in the Yugoslav Communist party and spent several years in prison. During World War II he organized partisan forces that successfully fought the Axis powers and their collaborators. In 1943 he was elected marshal of Yugoslavia and president of the National Liberation Committee, which formed the basis for the postwar Communist government.

Economy. Furthering the country's economic reform, the Federal Assembly on July 10 established guidelines for foreign investment in Yugoslavia. While the government's evaluation of the stabiliza-

YUGOSLAVIA • Information Highlights

EUROPE
ASIA
AFRICA

Area: 98,766 square miles (255,804 sq km).
Population: 19,897,000 (April 30, 1967 est.).
Chief Cities (1961 census): Belgrade, the capital, 585,234; Zagreb, 430,802; Skopje, 165,529; Sarajevo, 143,117.
Government: *President*—Marshal Josip Broz Tito (reelected May 17, 1967); *Parliament*—Federal Assembly, 670 members.
Religious Faiths: Serbian Orthodox Catholics, 41% of population; Roman Catholics, 33%; Muslims, 12%; others, 14%.
Education: *Literacy rate* (1961), 80% of population aged 10 and over. *Total school enrollment* (1964)—4,705,919 (primary, 2,972,225; secondary, 161,630; teacher-training, 28,942; technical, 372,623; higher, 170,499).
Finance (1967 est.): *National budget,* $784,000,000; *monetary unit,* dinar (12.50 dinars equal U. S.$1).
Gross Material Product (1966): $7,920,000,000.
Economic Indexes (1966): *Industrial production,* 226 (1958=100); *agricultural production,* 130 (1958=100); *cost of living,* 263 (1958=100).
Manufacturing (metric tons, 1966): Cement, 3,228,000; wheat flour, 2,124,000; crude steel, 1,872,000; wine, 569,000; gasoline (1965), 546,000; sugar, 573,000; cotton yarn, 92,520.
Crops (metric tons, 1966): Maize, 7,980,000; wheat (1967), 4,870,000; sugar beets, 3,633,000; potatoes, 3,230,000; grapes, 976,000; barley, 714,000; oats, 387,000.
Minerals (metric tons, 1966): Lignite, 28,164,000 (ranks 5th among world producers); iron ore, 2,496,000; crude petroleum, 2,220,000; bauxite, 1,884,000; coal, 1,128,000; silver (1965), 4,148,057 troy ounces.
Foreign Trade (1966): *Exports,* $1,220,100,000 (chief exports, 1965: transport equipment, $321,700,000; meat, $266,600,000; ships and boats, $185,900,000; electrical machinery, $151,100,000); *imports,* $1,575,400,000 (chief imports, 1965: nonelectrical machinery, $517,800,000; iron and steel, $297,800,000; wheat and maslin, $206,600,000). *Chief trading partners* (1965): USSR (took 17% of exports, supplied 8% of imports); Italy (took 13% of exports, supplied 11% of imports); U. S. (took 6% of exports, supplied 15% of imports).
Transportation: *Roads* (1964), 51,716 miles (83,227 km); *motor vehicles* (1965), 273,804 (automobiles, 187,842); *railways* (1965), 7,366 miles (11,852 km); *merchant vessels* (1966), 181 (1,094,000 gross registered tons); *national airline,* Jugoslovenski Aero Transport; *principal airports,* Belgrade, Dubrovnik, Ljubljana, Sarajevo, Skopje.
Communications (1967): *Telephones:* 452,248; *television stations,* 29; *television sets,* 850,000; *radios* (1965), 3,000,000; *newspapers* (1965), 23.

tion effects of the economic reform was favorable, the Federal Assembly in its mid-October session was concerned primarily with the country's economic difficulties. Industrial production in 1967 was stagnating, and agricultural production was 5% lower than in 1966. The foreign trade deficit continued to grow. During the first half of 1967 the deficit in the balance of payments grew by 17.5% over the same period in 1966. With unemployment high, a wave of workers' strikes took place in August.

Linguistic Controversy. On March 17, 19 Croatian cultural institutions signed a declaration complaining of the predominance of Serbian in the official usage of Serbo-Croatian. They called for a constitutional amendment that would make Croatian an officially recognized language along with Serbian, Slovenian, and Macedonian. In a counterproposal, 45 Serbian writers in Belgrade agreed to the proposal on the condition that Serbian children in Croatia be taught Serbian in Cyrillic letters. An open political controversy ensued. In a speech on March 28, Tito assailed "antiparty bourgeois elements" who had engaged in the controversy.

Mihajlov Case. In another move against nonconformists, Mihajlo Mihajlov, writer and lecturer at Zadar University, already sentenced to a year's imprisonment in 1966, was tried again on charges of spreading false information. He was found guilty on April 19 and sentenced to 4½ years.

Foreign Relations. Yugoslav-Soviet relations vacillated during the year. A *Pravda* article (February 20) criticized Yugoslav economic reforms in the strongest terms since 1960. The LCY did not attend the meeting at Karlovy Vary, Czechoslovakia, of 24 European Communist parties in April.

The outbreak of the Israeli-Arab war changed the situation, with Tito now mirroring the Soviet position. On June 5, Tito attacked Israel as "an aggressor and instrument of imperialism," and Yugoslavia broke diplomatic relations with Israel on June 13. Tito also attended Communist "summit meetings" in Moscow (June 9) and Budapest (July 11–12).

President Nikolai V. Podgorny of the USSR visited Tito twice in June. Tito toured Syria, Iraq, and the United Arab Republic (arriving on August 10), and offered a 5-point proposal for the solution of the Middle East crisis.

In his report to the Central Committee of the LCY on July 1, Tito explained that Yugoslavia's espousal of the Soviet line in the Middle East was necessary because of "menacing and possible imperialist aggression against Yugoslavia," but he denied a fundamental change in Yugoslav policy toward the USSR.

The military coup in Greece in April worsened Yugoslav-Greek relations. Greece unilaterally canceled an agreement on frontier traffic with Yugoslavia. By contrast, Yugoslav-Albanian relations improved, particularly in commercial exchanges, which increased by 25% over 1966.

The decision of the U. S. Congress in February to consider Yugoslavia ineligible for the U. S. food supply program because of its assistance to North Vietnam was criticized in Belgrade. Yet on March 7, the U. S. government agreed to lend Yugoslavia $8.7 million for the construction of two hydroelectric power stations and three railway lines. Nevertheless, U. S. policy in Vietnam was attacked by the Yugoslav government throughout the year.

MILORAD M. DRACHKOVITCH
The Hoover Institution, Stanford University

YUKON TERRITORY

The opening of a new copper mining and concentrator operation and announcement of plans for a mammoth lead-zinc operation were among developments of 1967 that gave promise of orderly and sustained development of the Yukon's mineral industry, based on production and processing of a variety of minerals. Road-building continued, and tourism gained.

Mineral Industry. The Anvil Mining Corporation, which acquired large claims in the Ross River area in 1966, announced plans for a lead-zinc operation that will be the largest single mining venture in the Yukon's history. The mine's initial rate of production is projected at 370,000 tons of concentrates a year, and a long-term sale of these concentrates to Japanese interests has been negotiated. The company is expected to invest more than $60 million in the project. Added impetus was given to the venture in August, when the federal government announced aid in the amount of $15 million for an area-development road and power facilities for the mine and a new townsite.

In June, an $8 million copper mining and concentrator operation of the New Imperial Mines Ltd. began production at its site 7 miles south of Whitehorse. Copper concentrate from this site is being shipped to Japan. Cassiar Asbestos Corporation's second mine, the $24 million Clinton Creek operation, was expected to go into operation in the late fall of 1967. In the design and planning stage are two gold-silver milling plants, each with a proposed capacity of 200 tons of ore a day. Arctic Mining and Exploration Ltd., one of the companies planning a mill, announced that it would open a silver and gold mine at a location 40 miles south of Whitehorse. Exploration throughout the territory continued for minerals, including gas and oil.

Other Developments. Further observations by scientific teams of the Yukon's "Galloping Glacier" (the Steele Glacier, which drains icefield ranges in the St. Elias Mountains) showed that the glacier had slowed its pace considerably from the 2 feet an hour surge observed in 1966.

New road construction amounted to 88 miles in 1967. Tourism, the Yukon's second largest industry, contributed $7 million to the economy, an increase of $2 million over 1966.

JAMES SMITH
Commissioner, Yukon Territory

YUKON TERRITORY • Information Highlights

Area: 207,076 square miles (536,327 sq km).
Population: 14,382 (1966 census).
Chief City (1966 census): Whitehorse, the capital, 4,771.
Government: *Commissioner,* James Smith. *Legislature*—Territorial Council, elected, 7 members: George O. Shaw, Dawson (Speaker); Donald G. Taylor, Watson Lake (Deputy Speaker and Chairman of Committee); Robert D. MacKinnon, Carmacks-Kluane; Frank G. Southam, Mayo; H. E. Boyd, Whitehorse East; J. K. Thompson, Whitehorse North; J. J. Watt, Whitehorse West.
Education: *School enrollment* (1966–67 est.)—elementary and secondary, 3,335 pupils (164 teachers); Indian (federal) schools, 72 pupils (4 teachers); vocational schools, 300 pupils (17 teachers). *School expenditures* (1965–66)—$1,858,902.
Public Finance (1965–66 est.): *Revenues,* $10,649,456. *Expenditures,* $10,143,184 (incl. $1,858,902 for education).
Public Assistance (year ending Mar. 31, 1966): $89,956 (aged and blind, $17,547; dependents and unemployed, $72,409).
Mining (1966 est.): *Production value,* $11,346,844. *Chief minerals*—silver, 4,078,223 troy ounces (ranks 4th in value among the provinces and territories); lead, 8,186 short tons (rank, 5th); gold, 40,035 troy ounces (rank, 6th).
Transportation (1967): *Roads,* 2,403.4 mi. (3,867 km); *motor vehicles,* 6,449; *railroads,* 58 track mi. (93 km); *airports,* 8.

ZAMBIA • Information Highlights

Area: 290,584 square miles (752,614 sq km).
Population: 3,894,000 (Dec. 31, 1966, est.).
Chief Cities (1965 urban agglomeration est.): Lusaka, the capital, 138,000; Kitwe, 129,000; Ndola, 100,000.
Government: *President*—Kenneth D. Kaunda (took office Oct. 24, 1964). *Parliament*—Legislative Assembly, 75 members.
Education: *African school enrollment* (1964)—376,799 (primary, 365,237; secondary, 8,981; higher, 2,581).
Finance (1966 est.): *Revenues,* $362,880,000; *expenditures,* $330,960,000; *public debt* (1965), $283,000,000; *monetary unit,* pound (0.3571 pound equals U. S.$1).
Gross National Product (1966): $1,011,900,000.
National Income (1966): $767,200,000; average annual income per person, $202.
Manufacturing (metric tons, 1966): Smelter copper, 585,600; lumber (1965), 43,000 cubic meters.
Crops (metric tons): Maize (1965–66), 222,000; tobacco (1966–67), 7,700.
Minerals (metric tons, 1965): Copper (1966), 624,000 (ranks 3d among world producers); limestone (1964), 567,146; zinc ore (1966), 63,480; manganese, 30,812; silver, 848,819 troy ounces; gold, 5,196 troy ounces.
Foreign Trade (1966): *Exports,* $690,760,000 (chief export: copper, $644,840,000). *Imports,* $344,680,000 (chief imports, 1965: nonelectrical machinery, $42,000,000; motor vehicles, $28,600,000). *Chief trading partners* (1965): Britain (took 38% of exports, supplied 20% of imports); Rhodesia (3% and 34%); South Africa (7% and 20%).
Transportation: *Roads* (1964), 21,217 miles (34,145 km); *motor vehicles* (1965), 46,700 (automobiles, 42,300).

ZAMBIA

Continued friction with Rhodesia, criticism of Britain's inability to cope with Rhodesia, and an offer of aid from Communist China in building an important railway were Zambia's main foreign concerns in 1967. Domestically, elections held for posts in the central committee of the single ruling party uncovered tribal antagonisms, which hitherto had not been apparent in Zambia.

Political Affairs. The annual United National Independence party (UNIP) elections, held at Mulungushi August 15–19, upset the tribal balance previously maintained in the one-party country. More of the powerful Bemba tribe won posts in UNIP's Central Committee. The biggest election upset was the victory of Foreign Affairs Minister Simon Kapwepwe, a Bemba, over Vice President Reuben Kamanga, an Angoni.

In September, President Kenneth David Kaunda reversed their duties in his cabinet, naming Kapwepwe vice president and Kamanga foreign minister. In other cabinet changes, former Finance Minister Arthur N. Wina became minister of education and former Agriculture Minister Elijah H. K. Mudenda became finance minister. No ministers were dropped from the cabinet.

President Kaunda, who was returned as party president, showed concern over the tribal cleavage revealed by the August elections. He urged adoption of his concept of "humanism" as an egalitarian goal transcending tribal and racial differences and enabling UNIP to achieve its motto of "One Zambia, One Nation." Zambia has 72 tribes. In addition there are 70,000 whites, who live mainly in the Copper Belt, where they administer the mines. During the year there were several instances of friction between African and white miners.

Foreign Relations. Zambia's relations with neighboring white-ruled Rhodesia remained troubled. In August, Rhodesia claimed that 200 terrorists had entered from Zambia and engaged in pitched battle with Rhodesia's security forces. Zambia undertook disengagement from Rhodesia in two jointly owned enterprises—Rhodesia Railways, on June 30, and Central African Airways (in which Malawi is also a partner), on December 31.

Kaunda has blamed Britain for not using force to end Rhodesia's illegal independence and to compel Rhodesia to accept African majority rule. Although Zambia in February accepted a $38 million aid package from Britain to be used for reducing Zambia's dependence on imports from and through Rhodesia, Kaunda continued to charge Britain with a "sellout." When British Commonwealth Relations Secretary George Thomson visited Lusaka, November 3–4, he declared that there would be no British sellout, but that no force other than sanctions would be used against Rhodesia. On February 6, Kaunda had reluctantly announced that his nation would support the UN sanctions against Rhodesia despite a firm belief that they would be ineffective.

On an Asian tour in June, President Kaunda visited India, Pakistan, and Communist China. He was met at the Peking airport by Chinese Premier Chou En-lai and Foreign Minister Chen Yi and was given a tumultuous reception.

Tanzania-Zambia Railway. On June 28, Kaunda confirmed that China had offered to finance at an estimated cost of $280 million, a 1,000-mile (1,600-km) railway project linking Lusaka with the Tanzanian port of Dar es Salaam on the Indian Ocean. Britain, the United States, France, and Japan had earlier expressed interest in building the Tanzania-Zambia Railway. Kaunda said that he would await replies from these countries before considering the Chinese offer of financial aid, technical experts, and Red Guards as laborers. No decision had been announced by the end of 1967.

Copper Producers Meet. Delegates from four nations that together produce 70 to 80% of the world's copper exports—Chile, Peru, Congo (Kinshasa), and Zambia—met in Lusaka, June 1–7. The preconference aim of stabilizing the world price of copper was not realized. However, the conferees did agree on coordinating research, sharing information, and setting up a permanent intergovernmental copper council in Paris.

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ZANZIBAR. See TANZANIA.

ZOOLOGY

Among the significant trends in the field of zoology in 1967 was an increasing emphasis on ecology, the study of the dynamic relationships between organisms and their physical and biological environments. The importance of ecology in the larger scientific domain and in society was evident in the planning for the International Biological Programme (IBP) and in the concern shown by both governmental and private agencies for the problems of conservation, pollution, and population.

The Ford Foundation awarded nine grants, totaling nearly $2.5 million, for support of ecological studies and for the development of ecological programs to be used in the administration of natural resources.

The U. S. Department of the Interior established an Office of Ecology in 1967. The purpose of this office is more significant than its actual size or scope at this early stage. One of its first items of concern is environmental quality, especially the management of atmospheric water.

International Biological Programme. The U. S. National Committee for the IBP completed two years of planning, which was summarized in a report issued by the National Research Council in March. Organic production on land, in freshwater, and in the seas is one major subject of the planned 5-year program, which began in July 1967. Studies of adaptation are also planned.

A broad ecological view of man's place in nature was evident in the introduction to the report which noted that "our goal should not be to conquer the world, but to live in harmony with it. To attain this goal, we need to learn how to control both the external environment and ourselves." The international program is intended to encourage, coordinate, and benefit present and future research that will contribute to that goal.

Human Population. The National Educational Television Film Service released a series of six documentary films entitled "The Population Problem." The series contrasted the hazards of uncontrolled population growth with the benefits of balanced growth. It has become a biological axiom that equilibrium, rather than growth, is the desirable and necessary objective.

Famine seems remote among the affluent peoples of the world, but in many nations, in the words of President Johnson, "the shadow of starvation and impending famine has grown ever darker." The seriousness of this condition is reflected in a 3-volume report, *The World Food Problem*, prepared by the President's Science Advisory Committee. The report, obtainable from the U. S. Government Printing Office, warns against building false hope and searching for panaceas when dealing with this steadily worsening problem.

The difference between nations in the urgency of the population problem is only one of time. Even at its present, relatively slow rate of increase, the population of the United States will double every 35 years. No realistic scientist or economist will argue that food production can be increased continually at a comparable rate. On Nov. 20, 1967, by the reckoning of the U. S. Bureau of the Census, the population of the United States passed 200 million—and it is expected to reach 400 million in the year 2002. (See also POPULATION.)

Nutrition and Disease. A new and interesting ecological relationship between host, microbe, and environment was described in November 1967 by Dr. Howard A. Schneider. The research report, with the alliterative title *Ecological Ectocrines in Experimental Epidemiology*, was based on 25 years of work by Dr. Schneider at Rockefeller University (formerly Rockefeller Institute) in New York City.

The host studied was the laboratory mouse (*Mus musculus*); the microbes were bacteria of the genus *Salmonella* (related to human typhoid agents); and the environmental substances were newly discovered chemical compounds called "pacifarins." Mice that received pacifarins in their food were much more resistant to the disease (salmonellosis) caused by the bacteria than mice deprived of the pacifarins. These chemical compounds, found to be concentrated in the outer part of grains, were produced by *Salmonella* organisms living on the grains. Further, certain strains of *Salmonella* that did not produce evident disease did produce pacifarins.

Pacifarins are highly potent; that is, they are reactive in low concentrations. They also are involved in an extremely dynamic situation, as revealed by the fact that a mouse that had eaten the pacifarin salmonellosis-resistance factor (SRF) all of its life lost its resistance to salmonellosis two days after withdrawal of SRF from its diet.

Ancient Ant. The oldest known social insect was described from two well-preserved specimens found in Cretaceous period amber from New Jersey. The specimens are clearly ants, but they are intermediate in many anatomical details between more recent ants and their presumed wasplike ancestors. In the outmoded jargon of the past, the specimens could be called "missing links."

The embedded ants appear as though they might have been alive a short time ago, but they actually lived some 100 million years in the past. When we consider that man diverged from a related group of primates only about 1 or 2 million years ago, the two little ants represent the beginnings of a truly ancient lineage.

Biological Clocks and Photoperiods. Two zoologists at the University of Texas tested the hypothesis that organisms are more responsive to light at certain times than at others in the regular daily cycle of light and dark. The study involved male house sparrows (*Passer domesticus*) during their breeding season, when their testes are enlarged.

In the experiment, the zoologists divided a number of male sparrows into four groups. One group was kept in continuous darkness. The remaining three groups were given 10 hours of darkness followed by 14 hours of pale green light each day, for a total of 24 hours. In two of these groups, 75 minutes of white light was added to the pale green light, one group receiving the additional light near the beginning of the green-light period and the other receiving it near the end. The third group, like the darkness group, served as a "control" to check for the possibility of factors other than the addition of white light causing the effects.

Activity occurred chiefly in the pale green light in all three groups. After 39 days, and near the end of the regular breeding season, the birds were killed and their testes removed and weighed. Of the four groups, only the group exposed to the 75 minutes of white light near the end of the 14-hour period of pale green light maintained large testes. This group had the same total amount of light and darkness as the group given the white light near the beginning of the green-light period, indicating that the birds were more sensitive to light at one point of their daily cycle than at another, at least in regard to the change measured.

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NECROLOGY · 1967

Following is a selected list of more than 300 prominent persons who died during the year 1967. Separate biographical articles on those persons whose names are preceded by an asterisk (*) may be found under their own headings in the text.

Adams, Michael J. (37), U. S. Air Force major; was pilot of one of three NASA X-15 rocket planes: d. (in air crash) in California desert area, Nov. 15.

***Adenauer, Konrad** (91), former German chancellor: d. Rhöndorf (near Bonn) Germany, April 19.

Alger, Frederick M., Jr. (59), U. S. public official and diplomat; was Republican secretary of state of Michigan (1946–52), and ambassador to Belgium (1953–57): d. Grosse Pointe, Mich., Jan. 5.

Allen, Henry (Red) (60), U. S. jazz musician; played trumpet with Louis Armstrong: d. New York, N. Y., April 17.

Amberg, Richard Hiller (55), U. S. publisher; publisher of St. Louis *Globe-Democrat* from 1955: d. New York, N. Y., Sept. 3.

Andrews, Laverne (51), U. S. singer; one of Andrew Sisters trio popular in the 1930's and 1940's: d. Hollywood, Calif., May 8.

Angell, Sir Norman (94), English author and Nobel Peace Prize winner: b. Holbeach, Lincolnshire, England, Dec. 26, 1872; d. Croydon, Surrey, Oct. 7, 1967. A champion of world peace and collective security, and the author of over 40 books, he was awarded the Nobel Peace Prize in 1933. After several years as a journalist in the U. S. and Europe, he won international fame with his book *The Great Illusion* (1910), in which he argued the futility of wars of conquest. His other books include *The Unseen Assassins* (1932), *Peace With the Dictators?* (1938), and *The Steep Places* (1948). From 1929 to 1931 he was a Labour member of Parliament.

Ansorge, Martin (85), U. S. public official; was Republican representative from New York (1920–22), and co-author of Edge-Ansorge Bill to create Port of New York Authority (1921): d. New York, N. Y., Feb. 4.

Araujo, Arturo (88), was president of El Salvador in 1931: d. San Salvador, El Salvador, Dec. 2.

***Attlee, Clement Richard** (84), former prime minister of Great Britain: d. London, England, Oct. 8, 1967.

Auer, Mischa (61), U. S. actor: b. St. Petersburg, Russia, Nov. 17, 1905; d. Rome, Italy, March 5, 1967. A character actor and comedian frequently cast in the role of an eccentric Russian, he appeared in scores of motion pictures, including *My Man Godfrey* (1935), *You Can't Take It With You* (1938), and *Brewster's Millions* (1945). Orphaned during the Russian Revolution, he went to the U. S. at the age of 15, began to appear on the New York stage in 1925, and made his film debut in 1928. After World War II he appeared frequently in European films and also acted on Broadway.

Aymé, Marcel (65), French author; wrote novels and plays including *Clérambard,* produced in U. S. in 1959: d. Paris, France, Oct. 14.

Babson, Roger W. (92), U. S. economist; was adviser on stock market trends and predicted the 1929 crash; founded the Babson Institute: d. Mountain Lake, Fla., Mar. 5.

Babst, Earl D. (96), U. S. businessman; was chairman of American Sugar Refining Company (1925–51): d. Greenwich, Conn., Apr. 23.

Bailey, William C. (Buster) (64), U. S. jazz musician; played clarinet with Louis Armstrong and W. C. Handy: d. Brooklyn, N. Y., Apr. 13.

Baird (Mrs.) Cora (54), U. S. puppeteer; nationally known on stage, films, and television for voices and animation of marionettes in puppetry team with her husband, Bil: d. New York, N. Y., Dec. 6.

Bakken, Elmaar H. (62), U. S. executive; was Boy Scout leader since 1927, served as observer at UN: d. New Brunswick, N. J., Mar. 15.

Banburgh, Lord William of (Tom Williams) (79), British politician; was minister of agriculture (1929–31, 1945–51); began as a coal miner but was named a life peer in 1961: d. Doncaster, England, Mar. 29.

Barden, Graham Arthur (70), U. S. public official; was Democratic representative from North Carolina (1935–61); former chairman of House, Education, and Labor Committee: d. New Bern, N. C., Jan. 29.

Barnes, Margaret Ayer (81), U. S. author; won 1930 Pulitzer Prize for her novel *Years of Grace:* d. Cambridge, Mass., Oct. 25.

Barnett, Claude A. (77), U. S. newspaperman; one of nation's most prominent Negro journalists; founded Associated Negro Press (1919): d. Chicago, Ill., Aug. 2.

William C. Bullitt

UPI

Charles Burchfield

UPI

John Coltrane

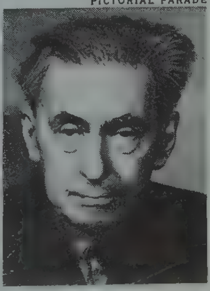
IMPULSE RECORDS

Nelson Eddy

UPI

Ilya Ehrenburg

PICTORIAL PARADE



Barton, Bruce (80), U. S. advertising executive and author: b. Robbins, Tenn., Aug. 5, 1886; d. New York, N. Y., July 5, 1967. He was the last surviving founder of Batten, Barton, Durstine & Osborn, one of the leading advertising agencies in the U. S. A skillful writer of advertising copy, he conveyed his inspirational philosophy in numerous articles and books, including his best-selling biography of Jesus, *The Man Nobody Knows* (1925). As a Republican Congressman from New York (1937–41) he was a staunch opponent of President Franklin D. Roosevelt's New Deal administration. A minister's son, Barton worked his way through Amherst College and was employed as a salesman and journalist before entering the advertising business in 1919. The present company was formed by a merger in 1928. Barton retired as board chairman of the firm in 1961.

Bell, Berkeley (59), U. S. tennis player; won men's national championship in 1930: d. New York, N. Y., June 15.

Benjamin, Henry Rogers (74), U. S. financier and philanthropist; was member of board of managers of Memorial Sloan-Kettering Cancer Center for 34 years: d. New York, N. Y., Feb. 22.

Berkowitz, Isaac (81), Russian-born Israeli writer; was son-in-law of Sholem Aleichem, whose works he translated into Hebrew from Yiddish; wrote plays and novels in Yiddish and Hebrew: d. Tel Aviv, Israel, Mar. 29.

Bickford, Charles (78), U. S. actor: b. Cambridge, Mass., Jan. 1, 1889; d. Los Angeles, Calif., Nov. 9, 1967. A character actor of rugged appearance, he was nominated for Academy Awards as supporting actor in the films *Song of Bernadette* (1944), *The Farmer's Daughter* (1947), and *Johnny Belinda* (1948). He began his acting career on stage and appeared on Broadway in such productions as Maxwell Anderson's *Outside Looking In* (1925). After making his motion picture debut in *Dynamite* (1929), he appeared in scores of films. In recent years he was also seen in *The Virginian* television series.

Bigelow, Dr. Henry B. (88), U. S. scientist; was credited with founding the science of American oceanography and established Woods Hole Oceanographic Institute (1930): d. Concord, Mass., Dec. 11.

Block, Martin (64), U. S. radio personality; achieved fame as disk jockey on New York radio station WNEW (1934–54) with program *Make Believe Ballroom:* d. Englewood, N. J., Sept. 19.

Boylen, Margaret (46), U. S. writer; wrote the novel *The Marble Orchard* (1956): d. New York, N. Y., May 21.

Bracci, Cardinal Francesco (87), Italian prelate; Vatican expert on canon law; helped implement Lateran Pacts: d. Rome, Italy, Mar. 24.

Breen, Richard L. (47), U. S. screenwriter; won Academy Award for his screenplay *Titanic* (1954): d. Sherman Oaks, Calif., Feb. 1.

Broder, Nathan (62), U. S. musicologist; was an expert on Mozart and Bach; had edited 19 Mozart sonatas and four fantasies (1955): d. New York, N. Y., Dec. 16.

Buckley, Charles A. (76), U. S. political leader; was New York Democratic congressman (1934–64); Bronx County leader (1953–64): d. New York, N. Y., Jan. 22.

Bullitt, William C(hristian) (76), U. S. diplomat: b. Philadelphia, Pa., Jan. 25, 1891; d. Neuilly-sur-Seine, France, Feb. 15, 1967. A close adviser to Presidents Woodrow Wilson and Franklin D. Roosevelt, he was the first U. S. ambassador to Moscow (1933–36) and served as envoy to Paris (1936–40). Educated at Yale and Harvard, he worked as a newspaper correspondent before joining the U. S. State Department in 1917. He accompanied Wilson to the Versailles peace conference, and was sent on a secret mission to Moscow to confer with Lenin. In 1933 he helped arrange U. S. recognition of the USSR, but he later became disillusioned with the Soviet regime. After the fall of France in 1940 he undertook wartime missions in the Middle East and Africa. In 1944 he joined Gen. Charles de Gaulle's Free French forces. After the war he was a strong anti-Communist spokesman.

Burchfield, Charles (Ephraim) (73), U. S. artist: b. Ashtabula, Ohio, April 9, 1893; d. Gardenville, N. Y., Jan. 10, 1967. One of the most celebrated of contemporary American artists, he was noted in particular for his watercolors depicting scenes from nature. He began to draw during childhood and attended Cleveland School of Art on a scholarship. After serving in the army in World War I, he devoted his free time to painting while supporting himself in various jobs. In the 1920's his work, including scenes of American urban life, was frequently exhibited at the Montross Gallery in New York. In the 1930's he was commissioned by *Fortune* magazine to paint industrial scenes. After 1943 he concentrated primarily on nature as a subject. During summers he taught at universities and art institutes, and in 1963 he was appointed consultant in art at New York State University College in Buffalo. Among his honors was the 1960 gold medal of the American Institute of Arts and Letters.

Burlingame, Roger (67), U. S. writer; prolific author of verse, short stories, biographies, articles, and novels; wrote *General Billy Mitchell* (1952): d. West Redding, Conn., Mar. 19.

Burnette, Smiley (Lester Alvin) (55), U. S. actor; was the partner of Gene Autry in many cowboy films; played role of Charlie Pratt in television series *Petticoat Junction* since 1963: d. Encino, Calif., Feb. 16.

Campbell, Donald (Malcolm) (45), English automobile and speedboat racing driver: b. Povey Cross, Surrey, England, Mar. 23, 1921; d. Coniston, Jan. 4, 1967. In 1964 he established the world water speed record at 276.33 mph and the world land speed record at 403.1 mph. He was the son of the late auto racing champion Sir Malcolm Campbell. From 1940 he was associated with engineering firms, and in 1954 he became director of Norris Brothers Ltd., which designed his *Bluebird* speedboat and *Bluebird* car. He was killed in a 300 mph crash of his jet-powered boat while trying to set a new record.

Cardijn, Joseph (85), Belgian Roman Catholic cardinal; was founder of Young Christian Workers in Belgium (1925) to combat religious laxity among the young: d. Louvain, Belgium, July 25.

Carnera, Primo (60), Italian boxer: b. Sequals, Italy, Oct. 25, 1906; d. there, June 29, 1967. He held the world heavyweight boxing championship from June 1933, when he won it from Jack Sharkey, until his defeat, a year later, by Max Baer. A former circus strongman, he went to the U. S. in 1930. Noted more for his strength and stamina than for his boxing skill, he won 87 of 100 professional bouts. He was frequently victimized by criminal elements, and his life in the ring served as the model for Budd Schulberg's novel *The Harder They Fall.* He ended his boxing career in 1937. In 1946 he began a second career as a professional wrestler. He became a U. S. citizen in 1953.

Carol, Martine (46), French actress; appeared in more than 40 French and English films from 1941 to 1961: d. Monte Carlo, Monaco, Feb. 6.

Cassidy, Leslie M. (62), U. S. industrialist; was president and board chairman of Johns-Manville Corporation (1951–57): d. Short Hills, N. J., Feb. 7.

Castelo Branco, Humberto (66), former president of Brazil: b. Fortaleza, Ceará, Brazil, Sept. 20, 1900; d. (air crash en route to Fortaleza) July 18, 1967. An honor graduate of the Escola Militar do Realengo, he was commissioned in 1921 and rose rapidly through the ranks of the Brazilian army, eventually becoming chief of staff. After assuming the presidency in a military coup that overthrew João Goulart in April 1964, he suspended civil liberties and instituted a rigid austerity program to stabilize the economy.

Chaffee, Roger, B. (32), U. S. astronaut and Navy lieutenant commander: d. in flash fire in Apollo spacecraft during rehearsal for scheduled Feb. 21 launching, Cape Kennedy, Fla., Jan. 27.

Chamberlin, Edward H. (68), U. S. economist; professor of economics at Harvard University (1922–66); author of *The Theory of Monopolistic Competition* (1933): d. Cambridge, Mass., July 16

Chandler, Walter (80), U. S. public official; Democratic member of House of Representatives (1935–40) and mayor of Memphis (1941–46): d. Memphis, Tenn., Oct. 1.

Cherney, Marvin (41), U. S. artist; was winner of numerous awards; painted scenes of New York City: d. New York, N. Y., Mar. 17.

Ching, Cyrus Stuart (91), U. S. industrial relations expert: b. Prince Edward Island, Canada, May 21, 1876; d. Washington, D. C., Dec. 27, 1967. Respected by both unions and management for his skill in settling industrial disputes, he served from 1947 to 1952 as director of the Federal Mediation and Conciliation Service. From 1919 to 1947 he worked for the U. S. Rubber Co. as supervisor of industrial relations and director of industrial and public relations, and during World War II he also served on the National Defense Mediation Board. In 1953 he was appointed to the atomic energy labor-management relations panel.

Choate, Anne Hyde (Mrs. Arthur) (80), U. S. philanthropist; was active in the Girl Scouts from 1915 until her death: d. Pleasantville, N. Y., May 17.

Ciollo, Augusta (65), U. S. actress; portrayed the aunt in prize-winning television and motion picture productions of *Marty:* d. Brooklyn, N. Y., Feb. 2.

Clark, Sir Arthur (58), British public official; was in colonial service since 1931; the first high commissioner of Cyprus (1960–64): d. London, England, May 29.

Cluytens, André (62), Belgian conductor; versatile conductor of French, Italian, and German music: d. Paris, France, June 3.

Cockcroft, Sir John Douglas (70), British physicist: b. Todmorden, Yorkshire, England, May 27, 1897; d. Cambridge, England, Sept. 18, 1967. He developed the first particle accelerator with E. T. S. In 1932 they used this device to bombard lithium with accelerated protons and produce alpha particles, thus bringing about the first nuclear reaction induced by artificially accelerated particles. In 1951 they shared the Nobel Prize for this work. Cockcroft was knighted in 1948 and received the U. S. Atoms for Peace award in 1961.

Cohen, Harriet (65), British musician; concert pianist noted for interpretation of Bach: d. London, England, Nov. 13.

Coltrane, John William (40), U. S. musician: b. Hamlet, N. C., Sept. 23, 1926; d. Huntington, N. Y., July 17, 1967. A tenor saxophonist, considered one of the most talented jazz musicians of recent times, he developed a unique and controversial style, creating what has been described as "sheets of sound." He made his professional debut in 1945 and played with top jazz groups, including those of Eddie Vinson, Dizzy Gillespie, Earl Bostic, Thelonious Monk, and Miles Davis, before organizing his own group, the John Coltrane Quartet. His music, which contained influences of the Orient, was popular in many parts of the world, including Japan. In 1965 *Downbeat* magazine named him "jazzman of the year" and elected him to its hall of fame.

Compton, Wilson M. (76), U. S. educator; was president of Washington State College (now University), served in many federal posts: d. Wooster, Ohio, Mar. 7.

Conarro, Harry Witborg (77), U. S. industrialist; was among first to develop a process of desalinization of sea water: d. New York, N. Y., Dec. 20.

Connely, Willard (78), U. S. writer; was biographer of 17th and 18th century authors; works include *The Reign of Beau Brummell* (1940): d. Godalming, Eng., Mar. 26.

Connor, Sir William (Cassandra) (57), British columnist; wrote acid-tongued column for London *Mirror* under pen name of "Cassandra": d. London, England, Apr. 6.

Cooke, Leslie E. (58), English churchman; was associate general-secretary of World Council of Churches from 1955: d. New York, N. Y., Feb. 22.

Copello, Giacomo Luigi (87), Argentinian cardinal; was appointed archbishop of Buenos Aires in 1928 and chancellor of Roman Catholic Church in 1959: d. Rome, Italy, Feb. 9.

Daly, Peter M. (76), U. S. public official; was New York state supreme court justice from 1936 until retirement in 1966: d. Forest Hills, N. Y., Jan. 13.

Darwell, Jane (87), U. S. actress; was 1940 Academy Award winner for her portrayal of Ma Joad in motion picture *Grapes of Wrath;* the last film of her long career in silent and talking films was as the Bird Woman in *Mary Poppins* (1964): d. Hollywood, Calif., Aug. 13.

Davis, Herbert J. (73), U. S. educator; was president of Smith College (1940–49); also taught at Cornell and Oxford universities: d. London, England, Mar. 28.

Day, James E. (62), U. S. executive; was founder and president (from 1946) of Midwest Stock Exchange: d. Chicago, Ill., Nov. 8.

de Grunwald, Anatole (56), British film producer; produced *The V. I. P.'s* (1963) and *The Yellow Rolls-Royce* (1965); his last film, *Strangers in the House,* was released in 1967: d. London, England, Jan. 13.

de Kallay, Nicholas (79), Hungarian government official; premier of Hungary (1942–44): d. New York, Jan. 14.

Denny, Reginald (75), British actor; appeared in over 200 films: d. Surrey, England, June 16.

De Sabata, Victor (75), Italian conductor and composer; was conductor at La Scala, Milan, from 1929; conducted all over Europe and North and South America: d. Santa Margherita Ligure, Italy, Dec. 11.

Deutscher, Isaac (60), Polish author; a leading writer on communism; wrote *Stalin: a Political Biography* (1949), and a trilogy on Trotsky (1954, 1959, 1963): d. Rome, Italy, Aug. 19.

Dewhurst, J. Frederic (72), U. S. economist; wrote *America's Needs and Resources* (1947); was an executive of the Twentieth Century Fund: d. Salt Lake City, May 26.

Dibelius, Otto (86), German bishop; was a Lutheran leader; served as bishop of Berlin and East German province of Brandenberg (1945–66): d. West Berlin, Jan. 31.

Donath, Ludwig (67), U. S. actor; known for character roles in films, TV, and theater; best-known film role was of cantor father in *The Jolson Story* (1947): d. New York, N. Y., Sept. 29.

Dunn, James (61), U. S. actor, winner of 1946 Academy Award as best supporting actor for role in *A Tree Grows In Brooklyn* (1945); other films include *Stand Up and Cheer* (1934); theater credits include *Harvey* (1949): d. Santa Monica, Calif., Sept. 3.

Duryea, James Frank (97), U. S. inventor; with brother Charles, designed first successful gasoline-powered automobile in U. S. (1893): d. Saybrook, Conn., Feb. 15.

Eagan, Eddie (69), U. S. athlete; winner of Olympic gold medals in boxing (1920) and bobsledding (1932); was New York state commissioner of boxing (1945–51): d. New York, N. Y., June 14.

Eddy, Nelson (65), U. S. singer and actor: b. Providence, R. I., June 29, 1901; d. Miami Beach, Fla., March 6, 1967. Noted for his resonant baritone voice and his wholesome masculinity, he attained the height of his popularity as a romantic lead, with Jeanette Macdonald, in film versions of such operettas as *Naughty Marietta* (1935), *The Girl of the Golden West* (1938), *Sweethearts* (1938), *Bitter Sweet* (1940), and *I Married an Angel* (1942). After working at a variety of jobs he made his Metropolitan Opera debut in *Pagliacci* in 1924 and gave his first concert recital in Philadelphia in 1928. His first motion picture role was in *Broadway to Hollywood* (1933). Other films in which he starred include *Rosalie* (1937), *Balalaika* (1939), and *The Chocolate Soldier* (1941). He was also popular as a radio performer.

Ehrenburg, Ilya (76), Soviet author and journalist: b. Kiev, the Ukraine, Jan. 27, 1891; d. Moscow, Sept. 1, 1967. One of the most esteemed men of letters in the Soviet Union, he was a leading spokesman for official Soviet policy in the 1930's and 1940's and emerged as a champion of cultural freedom after the death of Joseph Stalin. A member of a middle-class Jewish family, he engaged in revolutionary activity as a student and later went into exile in Paris, where he lived for many years. Originally skeptical about the Bolshevik Revolution, he satirized both Western capitalism and Soviet life in his early novels. His growing commitment to Soviet communism was reflected in his socialist realist novels of the 1930's. He became a correspondent for *Izvestia* in 1932 and won international fame as a war correspondent during World War II. Among his most important works are *The Fall of Paris* (1940), a novel set against the background of events that led to the collapse of France; his controversial novel *The Thaw* (1954), with which he sought to pave the way toward greater liberalization in the post-Stalin era; and his multivolume memoirs, which began with *People and Life* (1962).

Elman, Dave (67), U. S. hobbyist; was host of network radio program *Hobby Lobby* in 1930's and 1940's: d. Clifton, N. J., Dec. 5.

Mischa Elman

WIDE WORLD

Geraldine Farrar

UPI

Jimmy Foxx

UPI

Woody Guthrie

WIDE WORLD

Langston Hughes

WIDE WORLD

Elman, Mischa (76), U. S. musician: b. Talnoye, the Ukraine, Jan. 20, 1891; d. New York, N. Y., April 5, 1967. A violin virtuoso for more than six decades, he was the creator of the distinctive "Elman tone," noted for its opulence, warmth, and vibrancy, and he was acclaimed for his unique interpretations of Tchaikovsky, Beethoven, Brahms, and Mendelssohn. After studying with Leopold Auer at the St. Petersburg Conservatory, he made his professional debut in Berlin in 1904. He appeared in London in 1905 and gave his first New York appearance with the Russian Symphony Orchestra in 1908. He became a citizen of the U. S. in 1923.

Erasmus, Francois (70), South African government official; was minister of justice (1959–61) and ambassador to Italy (1961–65): d. near Bredasdorp, S. Africa, Jan. 7.

Epstein, Brian (32), English theatrical manager; mentor and manager of the Beatles: d. London, Aug. 27.

Erler, Fritz K. (53), German political leader; deputy chairman of West Germany's Social Democratic party from 1957: d. Pforzheim, West Germany, Feb. 22.

Erwin, Stuart (64), U. S. character actor; motion picture credits include *Pigskin Parade* (1936) and *Our Town* (1940); star of television series *The Trouble with Father:* d. Beverly Hills, Calif., Dec. 21.

Evans, Ross (51), U. S. author and playwright; collaborated with Dorothy Parker on several plays and screenplays; wrote *A Feast of Friends* (1961): d. Tannersville, N. Y., Aug. 21.

Fall, Bernard B. (40), French historian and journalist: b. Vienna, Austria, Nov. 19, 1926; d. near Hue, South Vietnam, Feb. 21, 1967. One of the foremost authorities on Vietnam, he held a professorship at Howard University and was the author of a number of books, including *Street Without Joy* (1961), *The Two Vietnams* (1963), *Hell in a Very Small Place* (1967), and *Last Reflections on a War* (1967). He held a somewhat skeptical view of U. S. involvement in Vietnam. A French citizen, he went to the United States as a Fulbright scholar in 1951 and made the first of many trips to Vietnam in 1953. He was killed while on patrol with U. S. Marines.

Farrar, Geraldine (85), U. S. singer: b. Melrose, Mass., Feb. 28, 1882; d. Ridgefield, Conn., March 11, 1967. One of the great prima donnas of the Metropolitan Opera, she was celebrated for her lyric soprano voice, dramatic talent, beauty, and temperament. She made her debut at the Royal Opera in Berlin in 1901 and gained considerable fame singing with various European opera companies before joining the Metropolitan in 1906. During her 16 seasons there she appeared frequently with Enrico Caruso and became identified with the title roles of such operas as *Madama Butterfly, Tosca, Carmen,* and *Manon.* Her career was climaxed in 1922 by her farewell appearance in *Zaza.* She also appeared in several Hollywood motion pictures and wrote an autobiography, *Such Sweet Compulsions* (1938).

Fawcett, Robert (64), U. S. artist; known as illustrator of books and magazines: d. Ridgefield, Conn., Apr. 13.

Finch, James Kip (83), U. S. educator; was dean of Columbia University School of Engineering and Applied Science: d. Norwalk, Conn., Apr. 14.

Finerty, John F. (82), U. S. lawyer; was best known for civil liberties cases: d. Cedarhurst, N. J., June 5.

Fitziu, Anna (80), U. S. opera singer; was star at Metropolitan Opera, 1916–28: d. Hollywood, Calif., Apr. 20.

Flanigan, Howard Adams (78), U. S. admiral; was decorated for service in both World Wars: d. Geneva, Switzerland, Mar. 30.

Flavin, Martin (84), U. S. author and playwright; winner of the 1943 Pulitzer Prize for his novel *Journey in the Dark:* d. Carmel, Calif., Dec. 27.

Fogarty, John E. (53), U. S. public official; Democratic congressman from Rhode Island from 1941: d. Washington, D. C., Jan. 10.

Forbes, Esther (76), U. S. author; won 1942 Pulitzer Prize for her biography *Paul Revere and the World He Lived In:* d. Worcester, Mass., Aug. 12.

Foulis, Benjamin D. (87), U. S. military officer; studied flying with the Wright brothers; was first American combat pilot (1916 in Mexico): d. Andrews Air Force Base, Md., Apr. 25.

Foxx, Jimmy (59), U. S. baseball player: b. Sudlersville, Md., Oct. 22, 1907: d. Miami, Fla., July 21, 1967. A member of the Baseball Hall of Fame, he was one of the great right-handed batters of all time. His record of 534 major league home runs had been exceeded by the time of his death only by Babe Ruth and Willie Mays. He began his baseball career at the age of 17 with the Philadelphia Athletics under Connie Mack. After time in the minor leagues, he became a regular member of the team in 1928. Playing at first and third base, he helped the Athletics to win pennants in 1929, 1930, and 1931, and World Series victories in 1929 and 1930. In 1935 he joined the Boston Red Sox, and at the time of his retirement in 1945 he was playing with the Philadelphia Phillies.

Frankau, Pamela (59), British author; praised by critics for subtlety and psychological insights; wrote many best-selling novels including *The Marriage of Harlequin* (1927) and *The Willow Cabin* (1949); d. London, June 8.

Franklin, Elizabeth Jennings (Mrs. George) (79), U. S. educator; was a founder of Bennington College: d. New York, N. Y., May 14.

Freeman, Howard (65), U. S. actor; was character actor whose parts on stage, screen, and television ranged from heavy to comic: d. New York, N. Y., Dec. 11.

Funk, Casimir (83), U. S. biochemist: b. Warsaw, Poland, Feb. 23, 1884; d. Albany, N. Y., Nov. 19, 1967. The discoverer of vitamins, he coined the term to apply to nutritional substances capable of preventing such diseases as beriberi, scurvy, pellagra, and rickets. His early research in this field led to the isolation of vitamin B_1 (thiamine). He undertook his work on vitamins at the Lister Institute of Preventive Medicine in London and published his early findings in the *British Journal of State Medicine* in 1912. Later he also did important work on sex hormones and in the field of cancer research, and he served as a research consultant to the U. S. Vitamin Corporation. He became a U. S. citizen in 1920.

Fyfe, David Patrick (Earl of Kilmuir) (66), British lawyer; a legal expert, he served as deputy chief prosecutor at Nürnberg war crimes trials (1945–46) and as lord chancellor (1954–62): d. Sussex, England, Jan. 27.

Garden, Mary (92), Scottish singer: b. Aberdeen, Scotland, Feb. 20, 1874; d. there, Jan. 3, 1967. A member of the Chicago Civic Opera Company for two decades, she was noted both for her artistry and temperament. She went to the United States at the age of 9 and later studied in Paris, where she attained stardom with her performance in the title role in *Louise* in 1900. Claude Debussy created the role of Mélisande for her in his opera *Pelléas et Mélisande,* produced in Paris in 1902. She made her U. S. debut at the Manhattan Opera House in 1907 and joined the Chicago Civic Opera three years later. Her policies as general director of the Chicago company in 1921–22 stirred considerable controversy. Among her most celebrated roles was the title role in *Salomé.* After her retirement from the operatic stage in 1931 she returned to Scotland. Her autobiography, *Mary Garden's Story,* was published in 1951.

Gardner, Albert TenEyck (58), U. S. art museum curator; was associate curator of American paintings and sculpture at New York's Metropolitan Museum of Art from 1957: d. New York, N. Y., July 12.

Gardner, Arthur (78), U. S. financier; was ambassador to Cuba (1954–57): d. Palm Beach, Fla., Apr. 11.

Garner, John Nance (98), U. S. vice president: b. near Detroit, Tex., Nov. 22, 1868; d. Uvalde, Tex., Nov. 7, 1967. The 32d vice president of the United States, he served in this office during the first two terms (1933–41) of President Franklin D. Roosevelt. After studying at Vanderbilt University he practiced law in Uvalde, Tex., was elected a county judge, and served two terms in the Texas legislature. In 1902 he was elected to the U. S. House of Representatives, where he served on the Foreign Affairs and Ways and Means committees. He became House minority leader in 1928 and speaker of the House in 1931. More conservative and isolationist than Roosevelt, he was chosen as a compromise vice presidential candidate at the 1932 Democratic convention. After 1936 he became increasingly disenchanted with New Deal policies. At the expiration of his term in 1941, "Cactus Jack" Garner retired to his Texas home.

Gassner, John Waldorn (64), U. S. (Hungarian-born) critic and writer on drama; was professor of playwriting and dramatic literature at Yale (from 1956); earlier he lectured on drama at many universities, including Columbia (1949–56): d. New Haven, Conn., Apr. 2.

Gestido, Oscar Daniel (66), Uruguayan president and army general; died nine months after inauguration; d. Montevideo, Uruguay, Dec. 6.

Gibbs, William Francis (81), U. S. naval architect; was outstanding marine engineer and naval architect; designed the superliner *United States:* d. New York, N. Y., Sept. 6.

Gilmore, Eddy (60), U. S. foreign correspondent; was Pulitzer Prize winner (1947) for "distinguished reporting on international affairs": d. London, England, Oct. 6.

Gitlin, Irving (49), U. S. radio and television producer: d. New York, N. Y., Dec. 12.

Gluhareff, Michael E. (74), U. S. engineer and inventor; aided Igor Sikorsky in developing the helicopter; held patents on fixed-wing planes: d. Bridgeport, Conn., Sept. 4.

Gollancz, Sir Victor (73), British publisher; was influential in preparing Britain for Labour party accession in 1945: d. London, England, Feb. 8.

Godwin, Bernard (62), U. S. artist; was portrait painter of famous personalities, including Pope John XXIII and Albert Einstein: d. New York, N. Y., Feb. 14.

Gold, Michael (74), U. S. writer; wrote social protest works including *Jews Without Money* (1920): d. Terra Inda, Calif., May 14.

Gordon, Agnes (61), U. S. bridge champion; was member of three Olympiad teams: d. Buffalo, N. Y., May 24.

Grant, Margaret (72), U. S. economist; was leader in world peace movements; served as UN economist (1946–55): d. New York, N. Y., Apr. 2.

Griffin, Gwyn (42), British author; wrote the novels *By the North Gate* (1959), *A Last Lamp Burning* (1966), and 1967 best-seller *An Operational Necessity;* d. Introdacqua, Italy, Oct. 12.

Grissom, Virgil Ivan (40), U. S. astronaut and Air Force lieutenant colonel; one of original seven Mercury astronauts; command pilot of *Gemini 3*, first 2-man spaceship orbited by U. S.; d. in flash fire in Apollo spacecraft during rehearsal for Feb. 21 launching, at Cape Kennedy, Fla., Jan. 27.

Guevara (Serna), Ernesto (Che) (39), Latin American revolutionary leader: b. Rosario, Argentina, June 14, 1928; d. near Higueras, Bolivia, Oct. 9, 1967. An expert in guerrilla warfare, he played a key role in the overthrow of Cuban dictator Fulgencio Batista by Fidel Castro in 1959, and he was responsible for much of the economic and ideological development of the Castro regime. After graduating from the University of Buenos Aires medical school in 1953 he left Argentina and became associated with revolutionary movements in several Latin American countries, eventually joining Castro's 26th of July movement. Under the Castro regime he headed the National Bank of Cuba from 1959 until 1961, when he was appointed minister of industry. In 1965 he disappeared from public view, and in late 1966 he was reported to have entered Bolivia. He was captured in a clash between Bolivian troops and guerrilla forces on Oct. 8, 1967, and died (according to some reports, he was executed) the next day.

Guthrie, Woody (Woodrow Wilson) (55), U. S. folk singer and composer: b. Okemah, Okla., July 14, 1912; d. New York, N. Y., Oct. 3, 1967. A spokesman for the "dust bowl refugees" and the migrant workers of the Depression era, he wrote over 1,000 songs, many of which have become part of the American folk tradition. His style inspired a later generation of folk singers, including Bob Dylan. Since going on the road in his teens, he sang and played the guitar at migrant camps, union meetings, and waterfront saloons from California to New York, and he was also heard in concert halls, on radio programs, and on numerous recordings. He was for a time associated with the Almanac Singers and with People's Song. His best known songs include *So Long, It's Been Good to Know You, Union Maid*, and *This Land Is Your Land*. His autobiography, *Bound for Glory*, was published in 1943.

Hadden, Maude (Mrs. Alexander M.) (86), U. S. civic leader; was president of Institute of World Affairs, which she founded in 1924: d. Palm Beach, Fla., Apr. 14.

Hall, Edmond (65), U. S. musician; was clarinetist with Louis Armstrong (1953–58); featured performer at Newport Jazz Festival: d. Cambridge, Mass., Feb. 11.

Hanneford, Edwin (Poodles) (75), U. S. circus performer; noted bareback-riding clown: d. Kattskill Bay, N. Y., Dec. 9.

Havenner, F. R. (84), U. S. public official; was Progressive representative (1937–41) and Democratic representative (1945–52) from California: d. San Francisco, Calif., July 24.

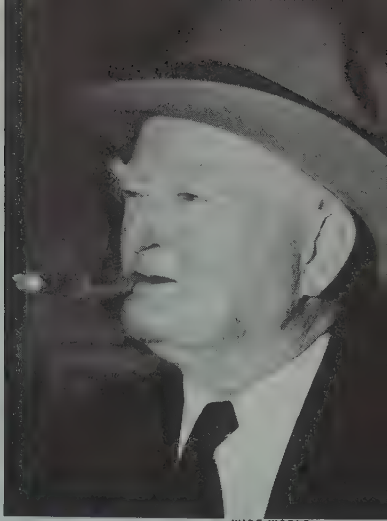
Heffernan, James H. (78), U. S. public official; was Democratic representative from New York (1941–52): d. Brooklyn, N. Y., Jan. 27.

Heim, Jacques (67), French couturier; was director of French fashion house for nearly 40 years: d. Paris, France, Jan. 7.

Henderson, Ernest, Sr., (70) U. S. hotel operator; was chairman of the Sheraton Corporation of America: d. Boston, Mass., Sept. 6.

Henry, Mary Gibson (82), U. S. botanist; discovered over 50 American plant species: b. Gladwyne, Pa., Apr. 16.

Heyrovsky, Jaroslav (75), Czech chemist: b. Prague, Czechoslovakia, Dec. 14, 1891; d. Prague, Mar. 27, 1967. He invented the polarograph, an instrument for the simultaneous qualitative and quantitative analysis of many chemical compounds. He listed its advantages as "the saving of time, greater precision, greater accuracy for microanalysis, and the total absence of any effect on the solution." In 1959 he became the first citizen of Czechoslovakia to receive the Nobel Prize. From 1950 he was director of the Czechoslovak Polarographic Institute.



John Nance Garner,

U. S. vice president

WIDE WORLD

High, Robert King (43), U. S. public official; Democratic mayor of Miami, Fla., from 1956: d. Miami, Aug. 30.

Hinshelwood, Sir Cyril Norman (70), English chemist: b. London, England, June 19, 1897; d. there, Oct. 9, 1967. His work in chemical kinetics on the factors that determine the rates of chemical reactions had gained him wide recognition by the time he published his *Kinetics of Chemical Change* in 1926. He was knighted in 1948, awarded the Nobel Prize in 1956, and elected to the Royal Society, serving as its president from 1955 to 1960. He was also a distinguished classical scholar.

Hobart, Alice Tisdale (85), U. S. novelist; was author of nine novels including the best-seller *Oil for the Lamps of China* (1933): d. Oakland, Calif., Mar. 14.

Hoblitzelle, Karl (87), U. S. businessman; was cultural and financial leader in Dallas: d. Dallas, Tex., Mar. 8.

Hochmuth, Bruno A. (56), U. S. Marine Corps general; was commander of Third Marine Division in Vietnam: d. (helicopter crash) near Hue, South Vietnam, Nov. 14.

Hoffman, Clare E. (92), U. S. government official; was Republican congressman from Michigan (1934–62): d. Allegan, Mich., Nov. 3.

Hogan, Frank (61), U. S. baseball player; was catcher in major leagues (1925–37); played for New York Giants, Boston Braves, and Washington Senators: d. Boston, Mass., Apr. 7.

Holland, Vyvyan (80), English author; was second son of Oscar Wilde; wrote autobiography *Son of Oscar Wilde* (1954): d. London, England, Oct. 10.

Holt, Harold Edward (59), Australian prime minister: b. Sydney, Australia, Aug. 5, 1908; d. (presumed drowned) Portsea, Victoria, Dec. 17, 1967. A protégé of Australia's long-time prime minister Sir Robert Menzies, he joined the Nationalist party in the 1930's and became a cabinet member in 1939. He went into the parliamentary opposition in 1941 and returned to the government with Menzies and the Liberals in 1949. He was treasurer from 1958 to 1966. He succeeded Menzies as prime minister and Liberal party leader on Jan. 20, 1966.

***Hopper, Edward** (84), U. S. painter: d. New York, N. Y. May 15.

Howe, Mark De Wolfe (60), U. S. lawyer and teacher; authority on constitutional law; taught at Harvard: d. Cambridge, Mass., Feb. 28.

Howell, Max D. (79), U. S. industrialist; was an officer (1962–63) of American Iron and Steel Institute: d. Brunswick, Ga., Jan. 20.

Hoyt, Henry A. (53), U. S. diplomat; ambassador to Uruguay from 1965: d. Montevideo, Uruguay, Dec. 16.

Hughes, (James) Langston (65), U. S. poet and author: b. Joplin, Mo., Feb. 1, 1902; d. New York, N. Y., May 22, 1967. A prolific writer, he rendered vivid, down-to-earth descriptions of Negro life in the United States in his poems, stories, novels, plays, and essays. Among his best known creations were his "Simple" stories, whose protagonist, Jesse B. Semple, offered wry commentary on the contemporary Harlem scene. After working at various jobs in Mexico, Africa, and Europe, he was discovered by

Vivien Leigh,

English actress

UPI

the poet Vachel Lindsay, who helped him publish his first book of verse, *Weary Blues* (1926) and encouraged him to complete his education at Lincoln University. In the 1930's Hughes was a foreign correspondent for the Baltimore *Afro-American*. His works include the novel *Not Without Laughter* (1930), a novel; *The Ways of White Folks* (1934), short stories; *The Big Sea* (1940), autobiography; *Shakespeare in Harlem* (1947), poems; the plays *Mulatto* (1935) and *Black Nativity* (1961); and lyrics for Kurt Weill's *Street Scene* (1946). Long active in the cause of Negro equality, Hughes was awarded the NAACP's Spingarn medal in 1960.

Hume, Benita (60), British actress; appeared on stage and screen; co-starred with husband Ronald Colman in radio-TV series *The Halls of Ivy* (1949–54): d. Egerton, England, Nov. 1.

Hunt, Frazier (82), U. S. author and newspaper correspondent; wrote biographies of Gen. Douglas MacArthur and King Edward VIII; d. Newtown, Pa., Dec. 24.

Hutheesing, Mrs. Krishna Nehru (60), Indian author; was sister of late Prime Minister Jawaharlal Nehru; author of seven books: d. London, England, Nov. 9.

Hyderabad, Nizam of (Asaf Jah) (80), Indian nobleman; was ruler of Indian kingdom (now state) of Hyderabad (1911–48); personal fortune once totaled $2 billion: d. Hyderabad, India, Feb. 24.

Ilsley, James Lorimer (73), Canadian government official; was minister of finance (1940–45); chief justice of Nova Scotia supreme court from 1950: d. Halifax, Jan. 14.

Jinnah, Fatima (74), sister of Pakistan's founder; she opposed President Ayub Khan in 1964 elections: d. Karachi, Pakistan, July 8.

Johnson, Albert R. (57), U. S. stage and motion picture set designer: d. New York, N. Y., Dec. 21.

Johnston, Wayne A. (70), U. S. railroad official; was president of Illinois Central Railroad (1945–66): d. Chicago, Ill., Dec. 5.

Juin, Alphonse-Pierre (78), French military officer: b. Bône, Algeria, Dec. 16, 1888; d. Paris, Jan. 27, 1967. A marshal in the French army since 1952, he was the last remaining Frenchman to hold this rank. In 1960 he broke with President Charles de Gaulle, whose policy of granting independence to Algeria he opposed, and he openly sympathized with the right-wing extremist Secret Army Organization (OAS), headed by Gen. Raoul Salan. A graduate of Saint-Cyr military academy, he commanded infantry troops in World War I and became a brigadier general in World War II. After the fall of France in 1940 he supported the Vichy regime of Marshal Pétain. He became resident general of Tunisia in 1943 and of Morocco in 1947. In 1953 he was appointed commander in chief of NATO land, sea, and air forces on the central European front. He retired in 1962.

Kaiser, Henry J(ohn) (85), U. S. industrialist: b. Sprout Brook, N. Y., May 9, 1882; d. Honolulu, Hawaii, Aug. 24, 1967. As chairman of the Kaiser Industries Corp. he headed a worldwide $2-billion industrial empire that includes mining, manufacturing, construction, engineering, and real estate enterprises. During World War II his shipyards produced almost one third of all U. S.-built merchant vessels. After establishing his first construction company in 1914 he built highways in the northwestern United States and in Cuba and pipelines in the Southwest. During the 1930's, Kaiser enterprises took part in the construction of the Boulder, Bonneville, Grand Coulee, and Shasta dams and the piers of the San Francisco-Oakland Bay Bridge. In World War II, in addition to his vast shipbuilding enterprises, he also manufactured iron, steel, magnesium, aircraft parts, and artillery shells. He was less successful in his postwar automobile manufacturing venture through the Kaiser-Frazer Corp.

Kavanagh, Patrick (62), Irish author; was a leading poet, playwright, and journalist; his most famous work was poem *The Great Hunger* (1942): d. Dublin, Ireland, Nov. 30.

Keane, John (Joseph) (55), U. S. baseball player and manager; was manager of St. Louis Cardinals (1960–64), whom he led to world series victory in 1964, and of New York Yankees (1964–66): d. Houston, Tex., Jan. 6.

Kefauver, Mrs. Nancy (56), was widow of Democratic Sen. Estes Kefauver of Tenn.: d. Washington, D. C., Nov. 20.

Kennedy, Margaret (71), English novelist and playwright; wrote *The Constant Nymph* (1924): d. Adderbury, Oxfordshire, England, July 31.

Kesselring, Joseph (65), U. S. author; wrote *Arsenic and Old Lace* (1941), one of Broadway's longest-running plays: d. Kingston, N. Y., Nov. 5.

Kincaid, William (71), U. S. flutist; was member of Philadelphia Orchestra (1921–60); considered one of the world's greatest flutists: d. South Philadelphia, Pa., Mar. 27.

Kiplinger, Willard Monroe (76), U. S. financial writer and editor; was founder of the *Kiplinger Letter* (from 1923) and *Changing Times* magazine (from 1947): d. Washington, D. C., Aug. 6.

Kline, C. Mahlon (86), U. S. business executive; was chairman of Smith Kline & French pharmaceutical house and a noted philanthropist and sportsman: d. Philadelphia, Pa., Apr. 3.

Kodály, Zoltán (84), Hungarian composer: b. Kecskemét, Hungary, Dec. 16, 1882; d. Budapest, March 6, 1967. Ranked along with Béla Bartók as one of Hungary's great contemporary composers, he incorporated the national folk idiom into his compositions, which include chamber music, choral works, operas, songs, piano music, and popular works. Kodály began to compose and to play the violin as a child. In 1905 he and Bartók embarked on a project compiling a collection of Hungarian folk music that included thousands of songs. Although his early works were influenced by French impressionism, his most important compositions, including the *Psalmus Hungaricus* (1923) and the opera *Háry János* (1926), were written in a nationalistic vein.

Koehler, Arthur (82), U. S. wood scientist; won fame in Lindbergh kidnapping case (1934) for his testimony on wood used in ladder: d. Los Angeles, Calif., July 16.

Komarov, Vladimir M. (40), Soviet cosmonaut; was first Russian to make two space flights: d. (in crash of spacecraft Soyuz 1) USSR, Apr. 24.

Korin, Pavel Dmitrievich (75), Soviet painter; was socialist realist artist and had the first Soviet one-man exhibition in U. S. (1965): d. Moscow, USSR, Nov. 22.

Korsah, Sir Arku (73), Ghanaian official; former chief justice of Ghana; dismissed by President Nkrumah in 1963: d. Accra, Ghana, Jan. 25.

Krajger, Boris (53), vice premier of Yugoslavia and a member of the Presidium of the Communist party since 1954: d. (highway accident) enroute to Belgrade, Jan. 5.

Kroll, Hans (69), German diplomat; was West German Ambassador to USSR (1958–62): d. Starnberg, West Germany, Aug. 8.

Krupp, Alfried (59), German industrialist: b. Essen, Germany, Aug. 13, 1907; d. there, July 30, 1967. A godson of Kaiser Wilhelm II, he graduated from Aachen Technical College in 1934, became deputy director of the Krupp works in 1936, and assumed control of the company in 1943. He was the last family head of an immense coal and steel empire that spanned five generations. As the chief supplier of armaments for Hitler's war machine and the employer of vast numbers of slave laborers, he was convicted of war crimes at Nürnberg in 1948 and imprisoned. After his release from prison in 1951, he rebuilt his industrial enterprise, with the aid of the Bonn government, into the 12th largest in the world. Turning away from armaments, Krupp concentrated on the production of industrial plants, ships, trucks, bridges, and many other products. In 1967 he agreed to relinquish one-man control and to establish a public stock company.

Kuhn, Richard (66), German chemist: b. Vienna, Austria, Dec. 3, 1900; d. Heidelberg, West Germany, Aug. 1, 1967. Known for his research on the structure and synthesis of vitamins, he was offered the Nobel Prize in 1938 but was barred by the Nazis from accepting the honor. From 1929 he was director of the Max Planck Institute for Medical Research at Heidelberg.

Kung, H. H. (86), Nationalist Chinese leader; brother-in-law of Chiang Kai-shek; was finance minister (1933–45) and premier (1939–45): d. New York, N. Y., Aug. 15.

LaBuy, Walter J. (78), U. S. jurist; was judge of Chicago Federal District Court (1944–61): d. Chicago, Sept. 29.

Lahr, Bert (72), U. S. comic actor: b. New York, N. Y., Aug. 13, 1895; d. there, Dec. 4, 1967. A master of the art of clowning, he was perhaps best known for his portrayal of the Cowardly Lion in the film *The Wizard of Oz* (1939). He began his career as a vaudeville performer in 1910 and spent a number of years on burlesque circuits before making his Broadway debut in *Delmar's Revels* (1927). His popularity grew with his performances in such musicals as *Hold Everything!* (1928), *Flying High* (1930), *Hot-Cha!* (1932), *The Show Is On* (1936), and *DuBarry Was a Lady* (1939). During the 1930's he also appeared in a number of Hollywood films. After making a comeback on Broadway he won critical acclaim for his portrayal of Estragon in Samuel Beckett's tragicomedy *Waiting for Godot* (1956). Shortly before his death he had been acting in the film *The Night They Raided Minsky's*.

Lambury of Northfield, Lord (71), British executive; was chairman and managing director of British Motor Corporation (1952–58): d. London, England, Sept. 13.

Lamont, Thomas Stilwell (68), U. S. banker, was partner of financier J. P. Morgan from 1929 to 1940; from 1959 to 1964, was vice chairman of Morgan Guaranty Trust Co. (New York): d. New York, N. Y., Apr. 10.

Landau, Jack (42), U. S. stage and television director; was director for American Shakespeare Festival and produced prize-winning television shows: d. (murdered) Boston, Mass., Mar. 16.

Landy, Alvin (62), U. S. bridge expert; one of world's leading contract bridge administrators; executive secretary of American Contract Bridge League: d. Atlantic City, N. J., Sept. 23.

Lane, William Preston, Jr., (74), U. S. public official; was Democratic governor of Maryland (1946–50): d. Hagerstown, Md., Feb. 6.

Larkin, Margaret (67), U. S. writer; was known for work in labor movement; wrote the novel *Seven Shares in a Gold Mine* (1959): d. Mexico City, Mexico, May 8.

Lavrovsky, Leonid (62), Russian choreographer; was artistic director of Bolshoi Ballet (1944–56; 1960–64): d. Paris, France, Nov. 26.

Lawrence, Reginald (67), U. S. author; collaborated on scripts for Broadway plays, including Cole Porter musical *Out of This World* (1950): d. New York, N. Y., Nov. 20.

Lawrence, Robert H., Jr. (31), U. S. Air Force major; was first Negro U. S. astronaut: d. (in plane crash) Edwards Air Force Base, Calif., Dec. 8.

Lee, Joshua Bryan (75), U. S. public official; was Democratic representative from Oklahoma (1935–37) and senator (1937–43): d. Norman, Okla., Aug. 10.

Leigh, Vivian (53), English actress: b. Darjeeling, India, Nov. 5, 1913; d. London, England, July 8, 1967. Noted for her sophisticated charm, she won Academy Awards for her film characterizations of Scarlett O'Hara in *Gone With the Wind* (1939) and Blanche du Bois in *A Streetcar Named Desire* (1951). After receiving dramatic training in London and Paris she made her London stage debut in 1935 and later worked in Shakespearean drama at the Old Vic. On Broadway and in London's West End she appeared in a variety of roles, ranging from serious drama to musical comedy, and including the feminine leads of both Shakespeare's *Antony and Cleopatra* and Shaw's *Ceasar and Cleopatra*.

Litchfield, Lawrence Jr. (67), U. S. industrialist; president and board chairman of Aluminum Company of America (retired 1965): d. Philadelphia, Pa., Oct. 28.

Lockwood, Adm. Charles A. (77), U. S. naval officer; was commander of U. S. submarine forces in Pacific theater during World War II: d. San Jose, Calif., June 6.

Lohia, Ram Manohar (57), Indian political leader; was a key socialist and political foe of the Congress party: d. New Delhi, India, Oct. 12.

***Luce, Henry R.** (68), U. S. publisher: d. Phoenix, Ariz., Feb. 28.

Luthuli, Albert John (69), South African Nobel Peace Prize winner: b. Rhodesia, 1898; d. near Groutville, South Africa, July 21, 1967. The recognized leader of millions of black South Africans, he was awarded the 1960 Nobel Peace Prize for his nonviolent struggle against his country's policies of racial discrimination. A Zulu, he was educated at Adam's Mission Station College near Durban, and later taught there (1921–36). He was elected tribal chief in 1936 and served for 17 years, at the same time becoming active in politics as a member of the African National Congress, which elected him general president in 1953. His anti-apartheid activities brought him increasingly into conflict with the South African government, which banished him to his farm near Groutville in 1959. His autobiography, *Let My People Go*, was published in 1962.

McAdoo, Eleanor Wilson (77), U. S. writer; the daughter of President Woodrow Wilson, she wrote about her father's career: d. Montecito, Calif., Apr. 5.

McClain, John Wilcox (63), U. S. journalist; was drama critic for New York *Journal-American* (1951–66); earlier, was columnist on New York *Sun*, New York *American*, and scenarist in Hollywood: d. London, England, May 3.

McCullers, Carson (50), U. S. author: b. Columbus, Ga., Feb. 17, 1917; d. Nyack, N. Y., Sept. 29, 1967. In her sensitive novels, stories, and plays, set against a background of the American South she dealt with the relationship of loneliness and love. She began to write at the age of 16, and took writing courses at New York and Columbia universities. Her first novel, *The Heart Is a Lonely Hunter* (1940), attracted wide attention. It was followed by *Reflections in a Golden Eye* (1941), which was filmed in 1967; and *The Member of the Wedding* (1946). Her short story, *The Ballad of the Sad Café* (1951), was later adapted for the stage by Edward Albee. Her last works were the play *The Square Root of Wonderful* (1958) and the novel *Clock Without Hands* (1961).

McEwen, Robert W. (60), U. S. educator; was president of Hamilton College (1949–66): d. Clinton, N. Y., May 31.

McGrath, Frank (64), U. S. actor; was star on *Wagon Train* television series: d. Beverly Hills, Calif., May 13.

Macken, Walter (51), Irish writer; was novelist (*The Scorching Wind*, 1964) and playwright (*Home Is the Hero*, 1954): d. Dublin, Ireland, Apr. 22.

Mackenzie, Jim (37), U. S. football coach; was head coach at University of Oklahoma (from 1966): d. Norman, Okla., Apr. 28.

McLean, Alexander N. (81), Canadian politician and businessman; was senator from New Brunswick, president of large fish-packing company: d. St. John, N. B., Mar. 12.

McNaughton, John Theodore (45), U. S. government official; was confirmed secretary of the Navy designate; served as an assistant defense secretary from 1964; d. (airplane crash) near Hendersonville, N. C., July 19.

Magritte, René (68), Belgian surrealist painter; noted for paintings of commonplace objects in unexpected combinations; works include *Summer Steps* (1937) and *The Domain of Lights* (1954); d. Brussels, Belgium, Aug. 15.

Henry J. Kaiser

WIDE WORLD

Alfried Krupp

UPI

Bert Lahr

WIDE WORLD

Albert John Luthuli

PIX

Jayne Mansfield

UPI

UPI

Carson McCullers,

U. S. author

Malinovsky, Rodion Y(akovlevich) (68), Soviet marshal: b. Odessa, the Ukraine, Nov. 22, 1898; d. Moscow, March 31, 1967. A soldier for more than half a century, he served as defense minister of the Soviet Union from 1957 until his death. He joined the czarist army at 16, rose through the ranks of the Red army after the revolution, and fought with distinction in World War II. In 1944 he was appointed a marshal. He served in the Far East from 1945 until 1956, when he was appointed commander in chief of ground forces and elected to the Communist party's Central Committee.

Mandell, Sammy (63), U. S. athlete; was lightweight boxing champion (1926–30): d. Oak Park, Ill., Nov. 7.

Mann, Anthony (60), U. S. motion picture director; noted for Westerns: d. Berlin, Germany, Apr. 29.

Mansfield, Jayne (Vera Jayne Palmer) (34), U. S. actress: b. Bryn Mawr, Pa., April 19, 1933; d. (auto accident) near New Orleans, La., June 29, 1967. An international symbol of glamour and sensuality, she attained wide popularity through her publicity photographs in the news media. She grew up in Dallas, Tex., where she attended Southern Methodist University. In 1954 she went to Hollywood but met with only moderate success as an actress, appearing in such films as *Pete Kelley's Blues* (1955), *The Wayward Bus* (1957), and *Kiss Them for Me* (1957). Her most important performance was in George Axelrod's Broadway hit *Will Success Spoil Rock Hunter?* (1955) and in the film version of the play.

Manville, Tommy, Jr. (Thomas Franklyn) (73), U. S. millionaire and playboy: d. Chappaqua, N. Y., Oct. 8.

Martin, Edward (87), U. S. politician; was governor of Pennsylvania (1943–47) and senator from the same state (1947–59): d. Washington, Pa., Mar. 19.

Martino, Gaetano (66) Italian government official; was president of the Liberal party, a leading exponent of European unity, and foreign minister (1954–57): d. Rome, Italy, July 21.

Masefield, John (88), English poet: b. Ledbury, Herefordshire, England, June 1, 1878; d. Berkshire, England, May 12, 1967. A founder of the modern movement in poetry, he was noted for the stark realism and salty language of his verse, reflecting his youthful experiences as a sailor and manual laborer. In 1930 he was named England's 17th poet laureate. Orphaned at an early age, he received little formal schooling before going to sea at the age of 13. During a two-year stay in the U. S. (1895–97) as a hobo and casual laborer, he discovered his affinity for poetry, and upon his return to England he avidly studied the poets of the past. His first published volume of verse, *Salt-Water Poems and Ballads* (1902), was an instant success, and his fame was assured with the publication of his long narrative ballad "The Everlasting Mercy" in *The British Review* (1911). In his lifetime he published a total of 70 books, including 28 volumes of poetry, 15 novels, an autobiography, and works on such subjects as history and the arts. His last book of verse, *Grace Before Ploughing*, was published in 1966.

Massey, Vincent (80), Canadian public official: b. Toronto, Ont., Feb. 20, 1887; d. London, England, Dec. 30, 1967. As Canada's first native-born governor general, from 1952 to 1959, he promoted national unity and advocated the development of a distinctive Canadian national character. He studied at the University of Toronto (B. A., 1910) and Oxford University (M. A., 1913). After early careers in teaching, government, and business, he became minister without portfolio in the Canadian cabinet in 1925 and served as Canada's first minister to the U. S. (1926–30). He was president of the Liberal party (1932–35) and high commissioner for Canada in Great Britain (1935–46). In 1947 he returned to Canada and was named chancellor of the University of Toronto. In July 1967 he was named a Companion of the Order of Canada in his country's first honors list.

Maurois, André (82), (real name, Émile Herzog), French writer: b. Elbeuf, near Rouen, France, July 26, 1885; d. Neuilly-sur-Seine, France, Oct. 9, 1967. One of France's foremost writers, he produced novels, short stories, history, and critical essays, but was best known for his vivid and colorful historical biographies, to which he applied meticulous research. He began to write during World War I, when his own experiences as a French officer resulted in his book *Les Silences de Colonel Bramble*. His first biographical work, *Ariel: The Life of Shelley* (Eng. trans. 1924), was followed by biographies of Disraeli, Lord Byron, Marshal Lyautey, Voltaire, Edward VII, Dickens, and Chateaubriand. A temporary stay in the U. S. during World War II resulted in two autobiographical volumes, *I Remember, I Remember* (Eng. trans. 1942) and *From My Journal* (Eng. trans. 1948); a *New History of the United States* (Eng. trans. 1948); and biographical studies of Eisenhower, Franklin, and Washington. Among his later works are biographies of Proust, George Sand, Victor Hugo, the Dumas family, and Balzac. Maurois was elected to the French Academy in 1938.

Maximus IV Saigh, Patriarch-Cardinal (89), was Melchite Patriarch of Antioch and all the Orient from 1947: d. Beirut, Lebanon, Nov. 5.

Mba, Léon (65), president of Gabon; served as president since independence in 1961; strong supporter of French President de Gaulle: d. Paris, France, Nov. 28.

Miller, Arthur Lewis (74), U. S. congressman from Nebraska (1943–59): d. Chevy Chase, Md., Mar. 16.

Miller, Max (68), U. S. author; wrote the 1932 best-seller *I Cover the Waterfront*: d. La Jolla, Calif., Dec. 27.

Momsen, Adm. Charles B. (70), U. S. naval officer and inventor; developed Momsen lung which enables trapped crewmen to escape from sunken submarines: d. St. Petersburg, Fla., May 25.

Morgan, Frederick E. (73), British general who planned Normandy invasion: d. London, England, Mar. 20.

***Morgenthau, Henry, Jr.** (75), former U. S. secretary of the treasury: d. Poughkeepsie, N. Y., Feb. 6.

Morse, Sir Arthur (75), British banker; was instrumental in effecting Hong Kong's financial recovery after World War II: d. London, England, May 13.

Morton, Charles W. (68), U. S. editor and journalist; an editor of *Atlantic Monthly* from 1941: d. London, England, Sept. 23.

Mossadegh, Mohammed (86), Iranian premier: b. Iran, 1880; d. Teheran, Iran, March 5, 1967. A passionate nationalist, he engineered the nationalization of Iran's petroleum industry soon after taking office as premier in 1951 and assumed far-reaching powers to deal with the resulting economic crisis. His earlier political career, in which he held a variety of government posts, was punctuated by periods of arrest and exile. Following his overthrow as premier by a royalist coup in 1953 he was tried for treason and placed under house arrest. He was the head of Iran's National Front party.

Muller, Hermann J. (76), U. S. geneticist: b. New York, N. Y., Dec. 21, 1890; d. Indianapolis, Ind., April 5, 1967. In the 1920's he showed that the offspring of fruit flies subjected to high doses of x-rays exhibited marked changes in structure. He traced these abnormalities to changes in the hereditary material (genes and chromosomes) of the fruit fly. This contribution to the study of genetic mutations and the effects of radiation won for Muller the Nobel Prize in 1946.

Muni, Paul (71), U. S. actor: b. Lemberg, Austria, Sept. 22, 1895; d. Santa Barbara, Calif., Aug. 25, 1967. One of the great actors of stage and screen, he won an Academy Award in 1936 for his performance in the film *The Story of Louis Pasteur* and received a Tony award in 1956 for his portrayal of Clarence Darrow in *Inherit the Wind* on the Broadway stage. A member of a theatrical family, he made his acting debut at the age of 12 in the Yiddish theater in New York City. His first English-speaking role was in the play *We Americans* (1926). Among the motion pictures in which he gave memorable performances were *Scarface* (1932), *I Am a Fugitive From a Chain Gang* (1932), *The Good Earth* (1937), *The Life of Emile Zola* (1937), *Juárez* (1939), *We Are Not Alone* (1939), *A Song to Remember* (1945), and *The Last Angry Man* (1959).

Munnich, Ferenc (81), Hungarian Communist leader; was premier from 1950 to 1961: d. Budapest, Nov. 29.

Muste, A(braham) J(ohannes) (82), U. S. pacifist: b. Zierikzee, the Netherlands, Jan. 8, 1885; d. New York, N. Y., Feb. 11, 1967. A leader in the pacifist movement for half a century, he served as national chairman of Fellowship for Reconciliation from 1926 to 1929 and was its executive secretary from 1940 to 1953. Since 1957 he had been national chairman of the Committee for Nonviolent Action. A graduate of Union Theological Seminary (B. D., 1913), he served as a Congregational minister before becoming active in the peace movement in World War I. In the 1920's and early 1930's he served as a labor organizer, and from 1921 to 1933 he was also educational director of Brookwood Labor College. During his last years he organized and took part in various protest activities against U. S. military involvement in Vietnam.

Nesbit, Evelyn (Thaw) (82), U. S. principal in famous Thaw-White murder case (1906): d. Santa Monica, Calif., Jan. 17.

Newcomer, Francis K. (77), U. S. Army official; was governor of Panama Canal Zone (1948–52): d. San Antonio, Tex., Aug. 16.

Nikulin, Lev. V. (75), Soviet novelist; won Stalin prize in 1950 for *Russia's Faithful Sons:* d. Soviet Union, Mar. 8.

Norris, Frank C. (60), U. S. editor and author; was with *Time* magazine (1929–48) and senior editor of *Newsweek* (until 1955); won 1957 Harper Prize for novel *Tower in the West:* d. Siasconset, Mass., Aug. 8.

O'Brien, John T. (71), U. S. labor official; was vice president of International Brotherhood of Teamsters: d. Chicago, Ill., Mar. 31.

O'Connor, Hugh (46), Canadian film producer; was producer of *Labyrinth*, acclaimed film at Expo 67: d. (shot to death) Whitesburg, Ky., Sept. 20.

Odell, Shepard (83), U. S. poet and historian; won Pulitzer Prize (1937) for biography of Bronson Alcott: d. New London, Conn., July 19.

O'Hara, Geoffrey (84), U. S. songwriter; best known for his World War I song hit, *K-K-K-Katy:* d. St. Petersburg, Fla., Jan. 31.

O'Neal, Emmet (80), U. S. public official; was Democratic representative from Kentucky (1935–46) and ambassador to Philippines (1947–49): d. Washington, D. C., July 18.

***Oppenheimer, J. Robert** (62), U. S. nuclear physicist: d. Princeton, N. J., Feb. 18.

Orr, Carey (77), U. S. cartoonist; was political cartoonist for Chicago *Tribune* (1917–63); won a Pulitzer Prize in 1960: d. Wilmette, Ill., May 16.

Osborn, Albert W. T. (80), English evangelist; as general of International Salvation Army, was supreme commander of world operations (1946–54): d. Bournemouth, England, Feb. 4.

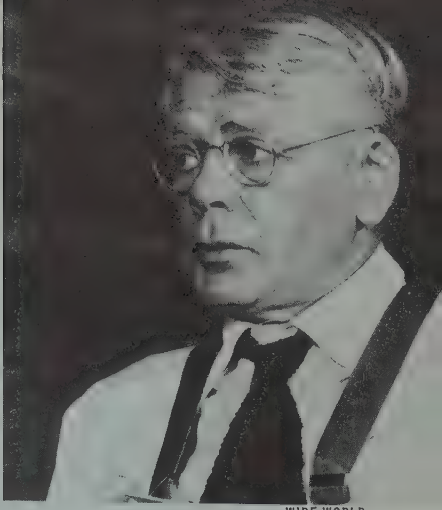
Overton, Frank (49), U. S. actor; was star of television show *Twelve O'clock High;* also starred on Broadway and in films: d. Pacific Palisades, Calif., Apr. 24.

Pacini, Alfredo (79), Italian Roman Catholic cardinal; was a member of the Curia, and had been papal nuncio to Switzerland and Yugoslavia: d. Rome, Italy, Dec. 23.

Paddleford, Clementine H. (67), U. S. food editor: b. Stockdale, Kan., Sept. 27, 1900; d. New York, N. Y., Nov. 13, 1967. As food editor of the New York *Herald Tribune* from 1936 to 1966 and of *This Week* magazine from 1940 until her death, she was noted for her poetic and sensitive approach to the culinary art. She began her writing career with a local newspaper at the age of 15, and graduated from Kansas State University in 1921. At the height of her career her readers numbered some 12 million a week. Her books include *How America Eats* (1961) and *Clementine Paddleford's Cook Young Cookbook* (1966).

Parker, Dan (73), U. S. sports writer; was sports editor of New York *Mirror* (1926–63) and author of a widely read column: d. Waterbury, Conn., May 20.

Parker, Dorothy (73), U. S. writer: b. West End, N. J., Aug. 22, 1893; d. New York, N. Y., June 7, 1967. She was noted for her sardonic wit, which she conveyed in her poems, stories, critical essays, and conversation. Educated in private schools, she began her career as a writer for *Vogue* in 1916–17, worked as a drama critic for *Vanity Fair* from 1917 to 1920, and was a contributor to the *New Yorker* from 1925 until 1957. She was a founder and member of the Algonquin Round Table, an informal literary luncheon club that flourished in the 1920's. Her works include the volumes of light verse *Enough Rope* (1926), *Sunset Gun* (1928), *Death and Taxes* (1931), and *Not Deep As a Well* (1936). For her short story "Big Blonde" she received the 1929 O. Henry Memorial Award. She was coauthor of a Broadway play, *Ladies of the Corridor* (1953).



Paul Muni,

U. S. actor

WIDE WORLD

Pendleton, Nat (Nathanial Greene) (72), U. S. actor; was character actor who appeared in 94 motion pictures: d. San Diego, Calif., Oct. 11.

Pincus, Gregory Goodwin (64), U. S. scientist; was a developer of birth control pill: d. Boston, Mass., Aug. 22.

Powell, S. Robert (50), U. S. comic strip artist; drew *Sheena, Queen of the Jungle, Bat Masterson,* and *Mr. Mystic:* d. Huntington, N. Y., Oct. 1.

Prado, Manuel (Ugarteche) (78), Peruvian leader; was twice president (1939–45; 1956–62): d. Paris, Aug. 14.

Prud'homme, Cameron (75), U. S. actor; well-known personality of radio and television, stage and screen; played title role in *David Harum* radio serial of the 1930's: d. Pompton Plains, N. J., Nov. 27.

Pu Yi, Henry (61), Chinese emperor; was last Manchu emperor of China (1908–12) and Japan's puppet emperor of Manchukuo (1934–45): d. Peking, Oct. 17.

Quinn, Don (67), U. S. radio and television script writer; was creator and writer of the *Fibber McGee and Molly* show (1935–52) and *The Halls of Ivy* (1951–54): d. Los Angeles, Calif., Dec. 30.

Rains, Claude (76), U. S. actor: b. London, England, Nov. 10, 1890; d. near Sandwich, N. H., May 30, 1967. A character actor noted for his aristocratic bearing and resonant voice, he appeared in 56 films. He became one of the most highly paid stage and screen performers with his portrayal of Julius Caesar in the film version of Shaw's *Caesar and Cleopatra* (1944). He began his acting career at the age of 11 and became established in the British and American theater before making his motion picture debut in *The Invisible Man* (1933). He won praise for his portrayal of a villain in *Anthony Adverse* (1936), and he received Academy Award nominations for his performances in *Mr. Smith Goes to Washington* (1939), *Notorious* (1946), *Casablanca* (1947), and *Mr. Skeffington* (1947). On Broadway, he won a Drama Critics Circle award for his performance in *Darkness at Noon* (1951).

Randall, Clarence B. (76), U. S. industrialist; was president of Inland Steel Company (1949–53); received presidential Medal of Freedom (1962): d. Ishpeming, Mich., Aug. 4.

Randolph, Amanda (65), U. S. actress; portrayed mother-in-law in *Amos 'n Andy* on radio and television, and the maid on *The Danny Thomas Show:* d. Duarte, Calif., Aug. 24.

Ransome, Arthur (83), British author; was known for children's stories: d. Manchester, England, June 3.

Rasch, Albertina (76), U. S. dancer; was noted ballerina in Austria and choreographer of several Broadway musicals: d. Woodland, Calif., Oct. 2.

Rathbone, Basil (75), British actor: b. Johannesburg, South Africa, June 13, 1892; d. New York, N. Y., July 21, 1967. A veteran stage and screen actor, noted for his suave, debonair manner, he appeared in over 100 motion pictures, frequently as a villain, and was best known for his portrayal of Sherlock Holmes in 16 films in the late 1930's and early 1940's. He was educated in England, where he joined a Shakespearean company in 1911, and came to Hollywood in 1925. On Broadway he appeared in such productions as *The Barretts of Wimpole Street* (1933), *The Heiress* (1947), and *J. B.* (1959).

Read, Albert Cushing (80), U. S. admiral; was commander of flying boat that made first successful trans-Atlantic flight (1919): d. Miami, Fla., Oct. 10.

Reed, Florence (84), U. S. actress; her career on American stage spanned 58 years; was star of *Shanghai Gesture* (1926) and *The Skin of Our Teeth* (1942): d. East Islip, N. Y., Nov. 21.

Reinhardt, Ad (Adolf F.) (53), U. S. artist; was a prominent figure in the development of "minimal art" painting: d. New York, N. Y., Aug. 30.

Reyniers, James A. (59), U. S. scientist; was pioneer in biological research who founded germ-free laboratory at University of Notre Dame: d. Tampa, Fla., Nov. 3.

Riberi, Antonio (70), Italian cardinal; was a member of the Papal Curia; active for many years in Secretariat of State of the Vatican: d. Rome, Italy, Dec. 16.

Rice, Elmer (Leopold) (74), U. S. playwright: b. New York, N. Y., Sept. 28, 1892; d. Southampton, England, May 8, 1967. A pioneer in theatrical realism and experimental drama, he wrote 50 full-length plays, four novels, and a number of shorter plays, essays, stories, motion picture and television scripts. He won a 1929 Pulitzer Prize for *Street Scene,* a drama of social criticism. An honors graduate of New York Law School (1912), he practiced law before turning to the theater. His plays include *On Trial* (1914), *It is the Law* (1922), *The Adding Machine* (1923), *Counsellor-at-Law* (1931), *The Left Bank* (1931), *We the People* (1933), *Judgment Day* (1934), *Between Two Worlds* (1934), *Two on an Island* (1940), and *Dream Girl* (1945). In the 1930's he was briefly a director of the Federal Theater Project, and he was a founder-member of the Playwrights Producing Company (1938). He served as president of the Authors League and the Dramatists Guild and as a director of the American Civil Liberties Union. His autobiography, *Minority Report,* was published in 1963.

Rice, Paul North (79), U. S. librarian; headed reference department of New York Public Library (1937–53); was president of American Library Association (1947–48): d. Middletown, Conn., Apr. 17.

Riggs, Tommy (57), U. S. entertainer; known for creation of "Betty Lou" character on radio in the 1930's: d. Pittsburgh, Pa., May 21.

Ritter, Joseph Elmer, Cardinal (74), U. S. clergyman: b. New Albany, Ind., July 20, 1892; d. St. Louis, Mo., June 10, 1967. Archbishop of the Roman Catholic archdiocese of St. Louis since 1946, he was a champion of civil rights, religious freedom, liturgical reform, and Christian unity. After attending St. Meinrad seminary, he was ordained in 1917. In 1933 he was consecrated a bishop, and in 1944 he became the first archbishop of Indiana. As archbishop of St. Louis he ordered racial integration of all Catholic parochial schools in 1947; directed a large construction program for schools, churches, and hospitals; and sponsored a mission in Bolivia. In 1960 he was named to the College of Cardinals.

Rivers, Enrith D. (72), U. S. public official; was governor of Georgia (1937–41): d. Atlanta, Ga., June 11.

Roberts, Roy A. (79), U. S. journalist; was president of Kansas City (Mo.) *Star* (1947–63) and director of Associated Press: d. Kansas City, Mo., Feb. 23.

Rodríguez, Abelardo Luis (77), Mexican army general and government official; was president of Mexico from 1932 to 1934: d. La Jolla, Calif., Feb. 13.

Rosa, João Guimarães (59), Brazilian author; one of Brazil's greatest novelists; invested in Brazilian Academy of Letters (1967); author of *The Devil to Pay in the Backlands* (Eng. tr., 1963): d. Rio de Janeiro, Brazil, Nov. 19.

Ross, Barney (Barnet David Rosofsky) (57), U. S. boxer: b. New York, N. Y., Dec. 23, 1909; d. Chicago, Ill., Jan. 18, 1967. A former world lightweight and welterweight champion who was never knocked out, he is ranked among the top 10 welterweights of all time and is included in boxing's Hall of Fame. The son of a Talmudic scholar, he grew up in Chicago's slums and won a Golden Gloves title in 1929. He took the world lightweight championship in 1933 and won the welterweight crown in 1934 and again in 1935, remaining welterweight champion until 1938. As a Marine during World War II he was decorated for heroism at Guadalcanal. In his later years, having overcome a drug habit, he was a crusader against narcotics.

Rudkin, Margaret Fogarty (69), U. S. businesswoman; founder of Pepperidge Farm bakery, which she began at home in 1937: d. New Haven, Conn., June 1.

Ruffini, Ernesto (79), Italian cardinal (from 1946) and archbishop of Palermo (from 1945); was one of the leading conservative spokesman at Vatican Council II (1962–65); d. Palermo, Italy, June 11.

Ruíz, José, Martínez (Azorin) (93), Spanish writer; was considered one of Spain's greatest modern writers; his works include *La Voluntad* (novel) and *Brandy, mucho Brandy* (play): d. Madrid, Spain, Mar. 2.

Runyon, John W. (79), U. S. publisher; published Dallas (Tex.) *Times Herald* from 1960: d. Dallas, Jan. 20.

Ruman, Sig (82), U. S. actor; his stage credits included *Grand Hotel* (1930); he appeared in over 150 films including *Ninotchka* (1939) and *Stalag 17* (1963): d. San Diego, Calif., Feb. 14.

Sampson, Flem D. (92), U. S. political leader; was governor of Kentucky (1927–31): d. Louisville, Ky., May 25.

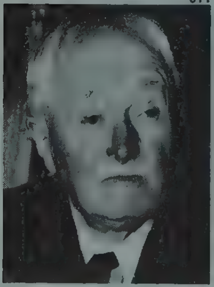
***Sandburg, Carl** (89), U. S. poet and biographer; d. Flat Rock, N. C., July 22.

Sanford, Fillmore H. (53), U. S. psychologist; was professor of psychology at University of Texas from 1947; was an advisory editor to the *Encyclopedia Americana:* d. Austin, Tex., Aug. 5.

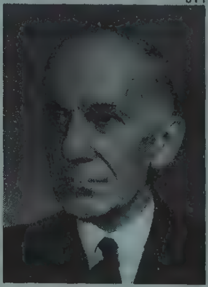
Sangster, Sir Donald Burns (55), Jamaican political leader; became prime minister following elections, Feb. 21, 1967; was knighted by Queen Elizabeth April 7; had served as acting prime minister since January 1965: d. Montreal, Canada, Apr. 11.

Sargent, Sir (Harold) Malcolm (Watts) (72), English conductor: b. Stamford, Lincolnshire, England, April 29, 1895; d. London, Oct. 3, 1967. One of Britain's most renowned musicians, he was best known for the Promenade concerts, which he conducted for 20 seasons. A church organist until World War I, he earned a doctor of music degree in 1919 and made his debut as a conductor at Queen's Hall in 1921. Later he taught at the Royal College of Music and served as a conductor for the Robert Mayer concerts for children, the D'Oyly Carte company, the Diaghilev Ballet, the Royal Choral Society, and various music festivals. In 1929 he founded the Courtauld-Sargent concerts in London. Since 1936 he had toured extensively abroad, and in 1945 he made his U. S. debut with the NBC Symphony. He conducted at Philharmonic Hall in New York in 1964 and 1965. He was knighted in 1947.

Sassoon, Siegfried (80), English poet: b. London, England, Sept. 8, 1886; d. near Warminster, Wiltshire, Sept. 1, 1967. A British army officer in World War I, decorated for heroism in combat, he bitterly denounced the brutality and sufferings of war in poems published in the volumes *The Old Huntsman* (1917), *Counterattack* (1918), *Collected War Poems* (1919), and *Picture Show* (1920). He attended Cambridge University and began to publish verse in 1906, but he attracted little notice until publication of his wartime poems. Later he depicted idyllic scenes of English country life in fictionalized autobiographical prose, including the 3-volume *Complete Memoirs of George Sherston* (1937). His later poetry was largely of a religious nature. He was created a Commander of the Order of the British Empire in 1957.


John Masefield

UPI


Vincent Massey

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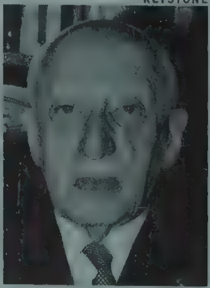

André Maurois

KEYSTONE

Dorothy Parker

WIDE WORLD

Claude Rains

UPI

Savage, John Lucian (88), U. S. engineer; was known as designer of Hoover and Grand Coulee dams and as a consultant on water resources projects around the world: d. Englewood, Colo., Dec. 28.

Schick, Béla (90), Hungarian-born U. S. pediatrician and medical researcher: b. Boglar, Hungary, July 16, 1877; d. New York, N. Y., Dec. 6, 1967. He developed the Schick test for determining susceptibility to diphtheria, and also made important contributions to the study of allergies, tuberculosis, scarlet fever, the metabolism of infectious diseases, and the nutrition of newborn children. Widely known as a pediatrician, Schick served as chief of pediatrics at New York City's Mount Sinai Hospital from 1823 to 1942.

Schuyler, Philippa Duke (35), U. S. pianist; was child prodigy as performer and composer: d. (air crash) Danang Bay, South Vietnam, May 9.

Sevitsky, Fabien (73), Russian-American musician; was conductor of Indianapolis Symphony Orchestra (1937–55) and of Greater Miami Philharmonic Society (from 1955): d. Athens, Greece, Feb. 2.

Sherek, Henry (67), English theatrical producer; his successes included *Edward, My Son* (1947), *The Cocktail Party* (1949), and *The Confidential Clerk* (1953): d. Venice, Italy, Sept. 23.

Sheridan, Ann (51), U. S. actress: b. Denton, Tex., Feb. 21, 1915; d. Hollywood, Calif., Jan. 21, 1967. Billed as the "oomph girl," she was one of the most popular film actresses in the late 1930's and early 1940's. A beauty contest winner, she went to Hollywood in 1933 in a Paramount Pictures promotional campaign. Her films include *Dodge City* (1939), *The Man Who Came to Dinner* (1941), *King's Row* (1941), *The Doughgirls* (1944), and *Shine on Harvest Moon* (1944). In recent years she confined her acting to the stage and television.

Smeterlin, Jan (74), Austrian-born English musician; was concert pianist known for his interpretation of Chopin: d. London, England, Jan. 18.

Snyder, Eldridge (66), U. S. architect; designed many buildings in U. S. and the Bahamas: d. Lyford Cay, Nassau, Mar. 24.

Somoza de Bayle, Luis Anastasio (45), Nicaraguan president: b. San Marcos, Nicaragua, Nov. 18, 1922; d. Managua, April 13, 1967. As president of Nicaragua from 1957 to 1963 he instituted political and economic reforms while moving vigorously against domestic rebels. After studying in the U. S. for nine years, he managed the family estates and headed the national airline. In 1950 he became a deputy in the congress. As president of the chamber of deputies, he succeeded his father, Anastasio Somoza (who was assassinated) in the national presidency.

Spanier, Muggsy (Francis Joseph) (64), U. S. musician; was cornetist with special style of Dixieland jazz; played with many big name bands: d. Sausalito, Calif., Feb. 12.

***Spellman, Francis** (78), Roman Catholic cardinal: d. New York, N. Y., Dec. 2, 1967.

Spence, Brent (92), U. S. public official; was Democratic congressman from Kentucky (1931–62): d. Fort Thomas, Ky., Sept. 18.

Stack, Morton M. (66), U. S. numismatist; was an internationally known coin collector and writer; editor of *Numismatic Review:* d. West Palm Beach, Fla., Dec. 28.

Stahlberg, Gideon (59), Swedish chess champion in the 1930's: d. Leningrad, USSR, May 26.

Steenbock, Harry (81), U. S. biochemist; discovered that ultraviolet light could stimulate vitamin D in various foods: d. Madison, Wis., Dec. 25.

Stewart, Rex (60), U. S. musician; jazz cornetist who was a star of Duke Ellington's band (1934–44): d. Los Angeles, Calif., Sept. 7.

Stokes, William E. (51), U. S. political scientist; was senior professor of comparative political institutions, Claremont Men's College (from 1962); wrote *Latin American Politics* (1959); contributed to THE AMERICANA ANNUAL: d. Claremont, Calif., Apr. 23.

Stone, George E. (George Edward Stein) (64), U. S. actor; was known for his character roles in gangster films: d. Woodland Hills, Calif., May 26.

Strayhorn, William Thomas (Billy) (51), U. S. musician: b. Dayton, Ohio, Nov. 29, 1915; d. New York, N. Y., May 31, 1967. A jazz composer, pianist, arranger, and lyricist, he was regarded by many as the musical "alter ego" of Duke Ellington, with whom he was closely associated for 28 years. In 1934, while studying classical piano in Pittsburgh, he heard a performance of Ellington's band and became converted to jazz. He joined Ellington's entourage in 1939 and soon became his chief arranger and associate composer. Among the Ellington tunes he composed and arranged were *Take the A Train, Day Dream, Johnny Come Lately,* and *Passion Flower.*

Taft, Hulbert, Jr. (60), U. S. executive; was chairman of Taft Broadcasting Company and member of Taft family of Ohio: d. Cincinnati, Ohio, Nov. 10.

Tedder, Arthur William, 1st Baron (76), British military officer: b. Glenguin, Stirlingshire, Scotland, July 11, 1890; d. Banstead, Surrey, England, June 3, 1967. A brilliant military strategist, he played a major role in the formulation of tactics that led to the defeat of German forces in the Mediterranean theater in World War II. In 1945 he was deputy supreme commander of Allied invasion forces in Europe under Gen. Dwight D. Eisenhower. Educated at Cambridge University, he was commissioned in the British army in 1913 and served as a pilot and air squadron leader in World War I. He was appointed commander in chief of the Middle East Command of the Royal Air Force in 1940, and commander of the Mediterranean Allied Air Command in 1943. In 1946–50 he was chief of the air staff, Britain's highest air command. After his retirement in 1951 he became chancellor of Cambridge University. He was named first baron of Glenguin in 1946.

Thomas, Rolland Jay (66), U. S. labor leader; was president of United Auto Workers (1936–46): d. Muskegon, Mich., Apr. 13.

Tien, Thomas (76), Nationalist Chinese Roman Catholic cardinal; was member of College of Cardinals from 1946 and archbishop of Peking: d. Taipei, July 24.

Toftoy, Holger N. (64), U. S. Army officer; an ordnance expert, he organized German scientists after World War II for U. S. rocket program: d. Washington, D. C., Apr. 19.

Toklas, Alice B. (89), U. S. literary figure: b. San Francisco, Calif., April 30, 1877; d. Paris, France, March 7, 1967. She was a close associate of the famed author Gertrude Stein from 1907 until Miss Stein's death in 1946. Together they presided over a renowned Paris literary salon that served for a number of years as a gathering place for the world's foremost artists and intellectuals. She gained wide attention with the publication of *The Autobiography of Alice B. Toklas* (1933), which actually was Gertrude Stein's autobiography. Miss Toklas' own autobiography, *What Is Remembered,* was published in 1963.

Tolan, Eddie (57), U. S. athlete; was track star and 1932 Olympic Games winner in 100- and 200-meter dash events: d. Detroit, Mich., Jan. 31.

Toto (Antonio de Curtis) (69), Italian film comic; appeared in over 100 films since 1920's: d. Rome, Italy, Apr. 15.

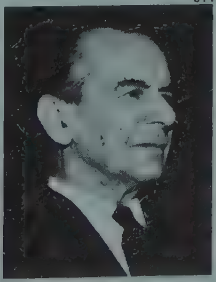
***Tracy, Spencer** (67), U. S. actor: d. Beverly Hills, Calif., June 10.

Basil Rathbone

WIDE WORLD

Sir Malcolm Sargent

UPI



Ann Sheridan

WIDE WORLD

Paul Whiteman

UPI

Shigeru Yoshida

WIDE WORLD

UPI

Georges P. Vanier, Canadian governor general

Tuck, Somerville Pinkney (75), U. S. diplomat; was first U. S. ambassador to Egypt (1946–48); served on board of Suez Canal Company (1948–56): d. Paris, France, Apr. 22.

Tynan, Brandon (91), U. S. actor; was known for his impersonation of David Belasco; wrote seven plays: d. New York, N. Y., Mar. 19.

Upjohn, Lawrence N. (93), U. S. businessman; was director of Upjohn pharmaceutical company (1930–44): d. Kalamazoo, Mich., June 2.

Valletta, Vittoria (84), Italian industrialist; major figure in Italy's postwar recovery, he built Fiat automobile firm into giant industry: d. near Lucca, Italy, Aug. 9.

Van de Graaff, Robert J. (65), U. S. physicist; was inventor of particle accelerator used in nuclear research and cancer therapy: d. Boston, Mass., Jan. 16.

van Gulik, Robert Hans (57), Dutch diplomat and author; was career diplomat since 1935; wrote mystery stories based on authentic plots from ancient literature: d. Amsterdam, Netherlands, Sept. 27.

Vanderbilt, Sanderson (57), U. S. writer and editor; was an editor of *The New Yorker* magazine from 1945: d. Palisades, N. Y., Jan. 22.

Vanier, Georges Philias (78), Canadian public official: b. Montreal, Canada, April 23, 1888; d. Ottawa, March 5, 1967. A major general in the Canadian army, he served as governor general of Canada from 1959 until his death. He was the first Roman Catholic and the first Canadian of French ancestry to hold this post. After graduating from Laval University (LL.B., 1911) he practiced law. In World War I he was a founder and member of Quebec's Royal 22d Regiment; and from 1925 to 1928 he was its commander. In 1931 he became counselor and secretary to the high commissioner for Canada in London. He served as ambassador to Allied governments in exile in 1943–44 and as ambassador to France from 1944 to 1953.

von Diringshofen, Heinz (67), German physician; was a pioneer in aviation and space medicine: d. Frankfurt, West Germany, May 5.

Walker, Herbert W. (71), U. S. journalist; was president of Newspaper Enterprise Association (1958–63): d. Leavenworth, Kans., Jan. 20.

Warner, Albert (84), U. S. motion picture executive; was one of four founding brothers of Warner Brothers Pictures: d. Miami Beach, Fla., Nov. 26.

Waterman, Alan T. (75), U. S. physicist; was first director of the National Science Foundation (1951–63): d. Washington, D. C., Nov. 30.

Waxman, Franz (60), U. S. composer; was best known for motion picture scores; won Oscars for *Sunset Boulevard* and *A Place in the Sun:* d. Los Angeles, Calif., Feb. 24.

Weinberger, Jerome (71), U. S. musician; was composer of *Schwanda, the Bagpiper* (1927): d. St. Petersburg, Fla., Aug. 8.

White, Edward Higgins II (36), U. S. astronaut and Air Force lieutenant colonel; was co-pilot of *Gemini 4* and the first American to execute a "space walk": d. in flash fire in Apollo spacecraft during rehearsal for Feb. 21 launching, at Cape Kennedy, Fla., Jan. 27.

Whiteman, Paul (77), U. S. bandleader and showman: b. Denver, Colo., March 28, 1890; d. Doylestown, Pa., Dec. 29, 1967. Known as the "King of Jazz" in the 1920's, he was the leader of the first of the big dance bands in the U. S. He is credited with having turned jazz into a "respectable" art form by orchestrating its rhythms and by introducing symphonies with jazz overtones, such as Gershwin's *Rhapsody in Blue,* to the concert hall. He began to study the violin at the age of seven and made his professional start as a violist with the Denver Symphony. Inspired by a jazz performance he had heard in San Francisco, he established his own dance band in 1919. During the 1920's the band performed at leading night clubs, ballrooms, and concert halls. It appeared in musical revues such as George White's *Scandals* and the *Ziegfeld Follies,* and it made best-selling recordings of such hits as *Three O'Clock in the Morning.* In the 1930's and 1940's Whiteman's band was regularly heard on the major radio networks. It also appeared in a number of films.

Wickard, Claude Raymond (74), U. S. government official: b. Carroll County, Ind., Feb. 28, 1893; d. (auto accident) near Delphi, Ind., April 29, 1967. As secretary of agriculture under President Franklin D. Roosevelt from 1940 to 1945 he championed conservation, advocated continuing price supports, and proposed measures for developing agricultural export markets. After graduating from Purdue University (1915) he managed the family farm. He also worked for the Indiana Farm Bureau and served in the Indiana Senate before becoming chief of the corn and hog section of the Agricultural Adjustment Administration in 1935. He was administrator of the Rural Electrification Administration in 1945–53.

Wiley, Alexander (83), U. S. public official; was Republican senator from Wisconsin (1938–62): d. Philadelphia, Pa., Oct. 26.

Wiley, John Cooper (73), U. S. diplomat; in 38-year career, he served as ambassador to Colombia, Portugal, Iran, and Panama: d. Washington, D. C., Feb. 3.

Wilson, Lyle Campbell (67), U. S. journalist; was vice president of United Press International (1953–64) and chief of Washington bureau of UPI (1933–64): d. Stuart, Fla., May 23.

Williams, Clifton C., Jr. (35), U. S. astronaut; was back-up pilot for Gemini 10 flight in 1966: d. (plane accident) in Florida near Georgia border, Oct. 5.

Woodring, Harry H(ines) (77), U. S. public official: b. Elk City, Kan., May 31, 1890; d. Topeka, Kan., Sept. 9, 1967. An early supporter of Franklin D. Roosevelt, he served as secretary of war from 1936 until 1940, when he resigned because of policy differences with the New Deal administration. After an early career in banking, he became governor of Kansas in 1930, and at the Democratic national convention of that year he helped Roosevelt obtain the presidential nomination. In 1933 he was appointed assistant secretary of war. In the early 1950's he supported Sen. Joseph R. McCarthy in his investigation of alleged Communist influences in the Army.

Work, John Wesley (66), U. S. composer; was student and collector of American folk music; wrote *Go Tell It on the Mountain:* d. Nashville, Tenn., May 18.

Wortman, Doris Nash (77), U. S. puzzle writer; was author of more than 3,000 double-crostic puzzles: d. Vineyard Haven, Mass., June 8.

Xceron, Jean (77), Greek-born U. S. artist; was pioneer in nonobjective art; served on staff of Guggenheim Museum from 1939: d. New York, N. Y., Mar. 29.

Yoshida, Shigeru (89), Japanese prime minister: b. Tokyo, Japan, Sept. 22, 1878; d. there, Oct. 20, 1967. As premier of Japan in 1946–47 and from 1948 to 1954 he worked closely with Allied occupation forces under U. S. Gen. Douglas MacArthur in establishing constitutional government and restoring economic prosperity to the nation. After graduating from Tokyo University he entered the diplomatic service and occupied consular posts in Manchuria and China. In the 1930's he served as ambassador to Sweden, Italy, and Britain. An anti-militarist, he was imprisoned toward the end of World War II for advocating peace negotiations. He was Japan's first postwar foreign minister, and in 1946 he became president of the Liberal party (known since 1948 as the Democratic Liberal party) before taking office as premier. A political and economic conservative, he adhered to a strongly anti-Communist and pro-American policy, although his views did not always coincide with those of the United States.

Youssoupoff, Prince Felix (81), Russian nobleman; was self-confessed slayer of monk Rasputin in 1916: d. Paris, France, Sept. 27.

Zadkine, Ossip (77), Russian-born sculptor; was one of first to apply principles of cubism in his work: d. Paris, France, Nov. 25.

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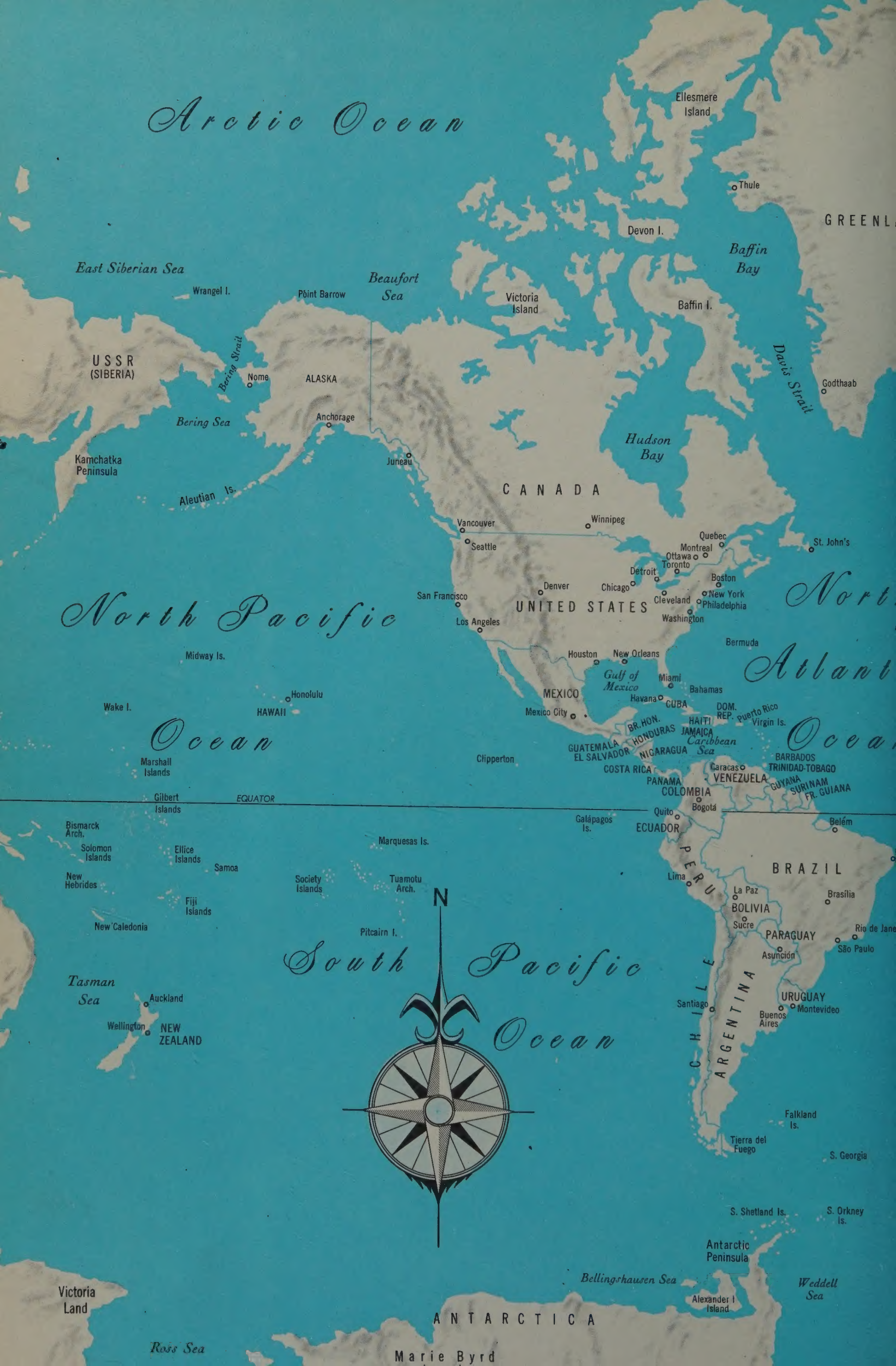
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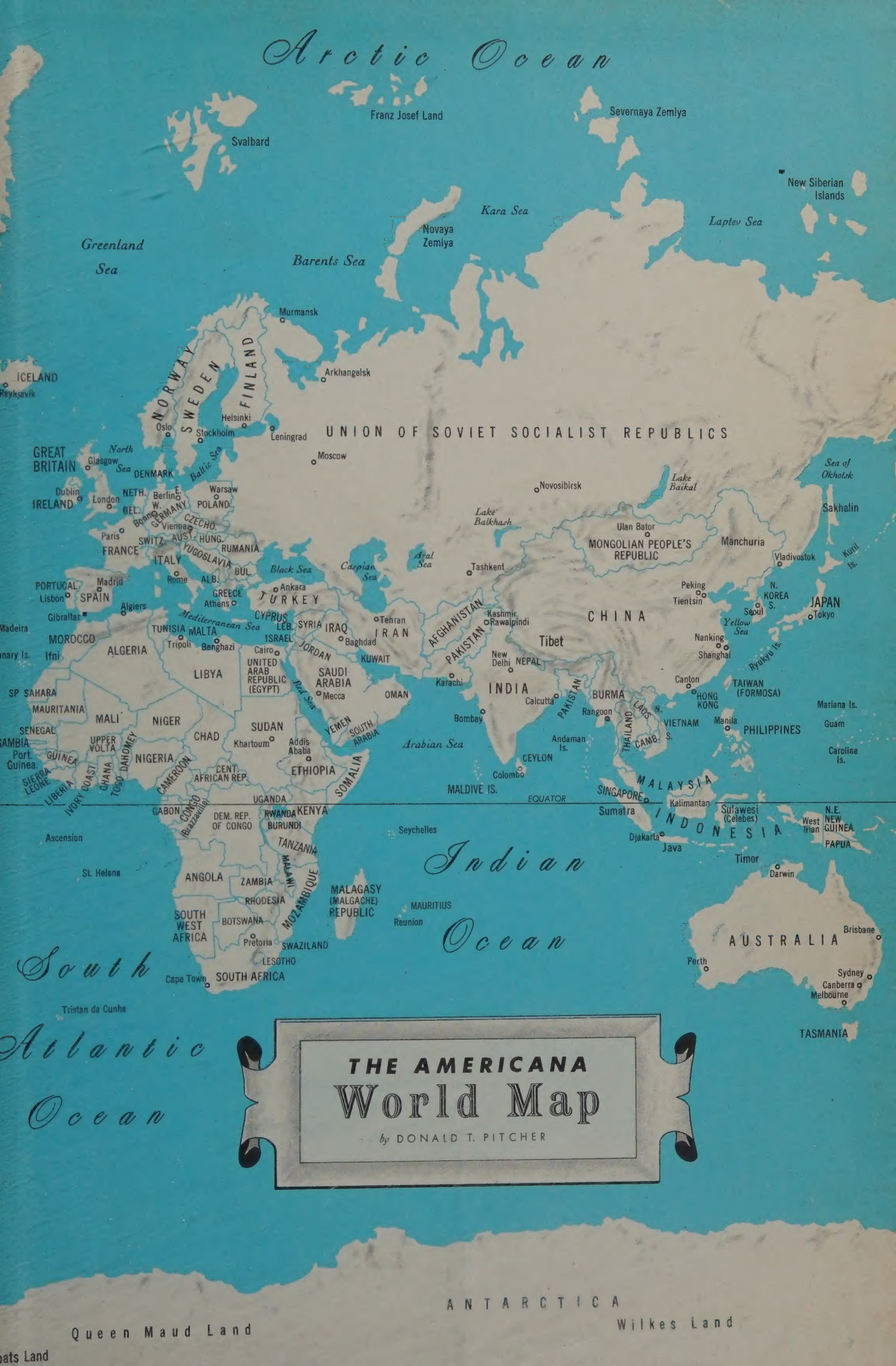
Ross Sea
Marie Byrd



THE AMERICANA

World Map

by DONALD T. PITCHER

Arctic Ocean
Franz Josef Land
Severnaya Zemlya
Svalbard
New Siberian Islands
Kara Sea
Laptev Sea
Novaya Zemlya
Greenland Sea
Barents Sea
Murmansk
ICELAND
Reykjavik
Arkhangelsk
NORWAY
SWEDEN
FINLAND
Helsinki
Oslo
Stockholm
Leningrad
UNION OF SOVIET SOCIALIST REPUBLICS
GREAT BRITAIN
Glasgow
North Sea
DENMARK
Baltic Sea
Moscow
Sea of Okhotsk
Dublin
IRELAND
London
NETH.
Berlin
E.
W.
GERMANY
Warsaw
POLAND
Bonn
BEL.
Novosibirsk
Lake Baikal
Sakhalin
Paris
FRANCE
SWITZ.
Vienna
CZECHO.
AUST.
HUNG.
RUMANIA
Lake Balkhash
Ulan Bator
MONGOLIAN PEOPLE'S REPUBLIC
Manchuria
ITALY
YUGOSLAVIA
BUL.
Black Sea
Caspian Sea
Aral Sea
Tashkent
Vladivostok
Kuril Is.
PORTUGAL
Lisbon
Madrid
SPAIN
Rome
ALB.
GREECE
Athens
Ankara
TURKEY
Peking
Tientsin
N. KOREA
S.
Seoul
JAPAN
Tokyo
Gibraltar
Algiers
Mediterranean Sea
CYPRUS
LEB.
SYRIA
IRAQ
Tehran
IRAN
AFGHANISTAN
Kashmir
Rawalpindi
CHINA
Yellow Sea
Madeira
MOROCCO
TUNISIA
MALTA
ISRAEL
Baghdad
Tibet
Nanking
Shanghai
Canary Is.
Ifni
ALGERIA
Tripoli
Benghazi
Cairo
JORDAN
KUWAIT
PAKISTAN
New Delhi
NEPAL
Ryukyu Is.
LIBYA
UNITED ARAB REPUBLIC (EGYPT)
SAUDI ARABIA
Karachi
Canton
SP. SAHARA
Red Sea
Mecca
OMAN
INDIA
Calcutta
PAKISTAN
BURMA
LAOS
HONG KONG
TAIWAN (FORMOSA)
MAURITANIA
Mariana Is.
MALI
NIGER
N.
VIETNAM
S.
Manila
Guam
SENEGAL
GAMBIA
SUDAN
YEMEN
SOUTH ARABIA
Bombay
Rangoon
THAILAND
PHILIPPINES
Port. Guinea
UPPER VOLTA
DAHOMEY
CHAD
Khartoum
Addis Ababa
Andaman Is.
CAMB.
GUINEA
NIGERIA
Arabian Sea
Caroline Is.
SIERRA LEONE
IVORY COAST
GHANA
TOGO
CAMEROON
CENT. AFRICAN REP.
ETHIOPIA
SOMALIA
CEYLON
Colombo
LIBERIA
MALAYSIA
MALDIVE IS.
EQUATOR
SINGAPORE
UGANDA
KENYA
GABON
CONGO (Brazzaville)
DEM. REP. OF CONGO
RWANDA
BURUNDI
Kalimantan
Sulawesi (Celebes)
N.E. NEW GUINEA
West Irian
Sumatra
INDONESIA
Ascension
Seychelles
Djakarta
Java
PAPUA
TANZANIA
Indian Ocean
Timor
Darwin
St. Helena
ANGOLA
ZAMBIA
MALAWI
MOZAMBIQUE
MALAGASY (MALGACHE) REPUBLIC
MAURITIUS
RHODESIA
SOUTH WEST AFRICA
BOTSWANA
Reunion
Brisbane
AUSTRALIA
Pretoria
SWAZILAND
LESOTHO
Perth
South Atlantic Ocean
Sydney
Canberra
Cape Town
SOUTH AFRICA
Melbourne
Tristan da Cunha
TASMANIA
ANTARCTICA
Wilkes Land
Queen Maud Land
Coats Land

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